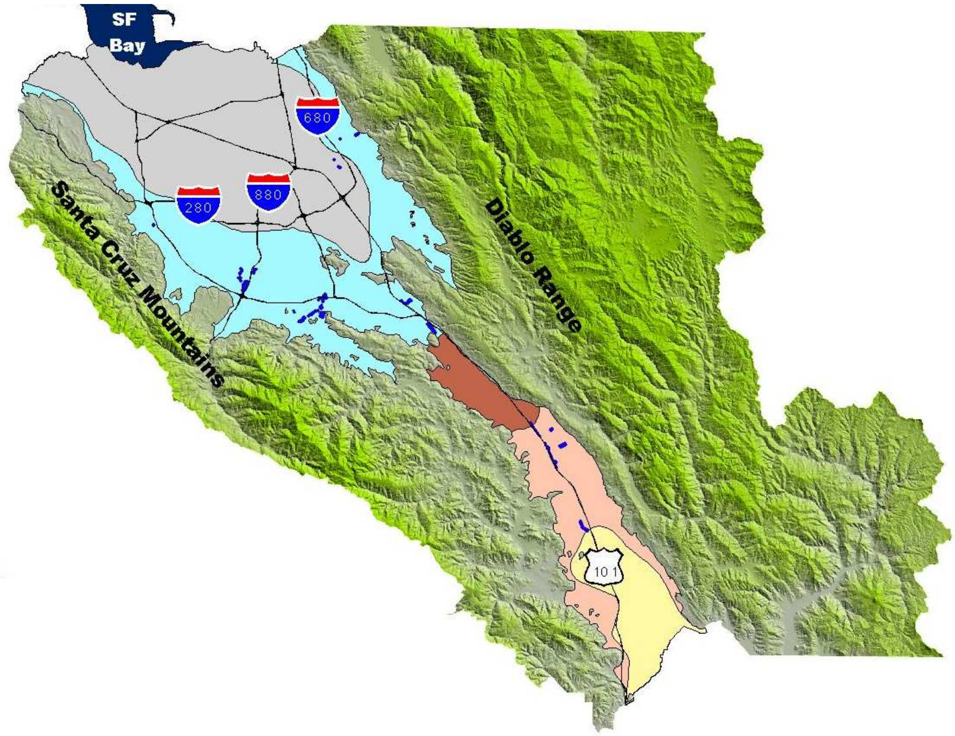
Final Report

Recycled Water Irrigation and Groundwater Study

Santa Clara and Llagas Groundwater Subbasins
Santa Clara County, California



Prepared for:

Santa Clara Valley Water District

31 August 2011

Locus TECHNOLOGIES

Project Overview

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Santa Clara and Llagas Groundwater Subbasins
Santa Clara County, California

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TABLE OF CONTENTS

1. INTRODUCTION 1
   - 1.1. Purpose 1
     - 1.1.1. SCVWD Objectives 1
     - 1.1.2. State Water Resources Control Board Objectives 2
   - 1.2. Project Study Area 2
   - 1.3. Report Organization 6
     - 1.3.1. Volume I: Literature Review and Data Analysis 6
     - 1.3.2. Volume II: Soil Attenuation Model and Bench Test 6
     - 1.3.3. Volume III: San Jose Pilot Study 7
     - 1.3.4. Volume IV: Evaluation of Potential Impacts 7
     - 1.3.5. Volume V: Proposed Recycled Water Irrigation Screening Levels, Best Management Practices, and Ongoing Monitoring Recommendations 8
   - 1.4. Review Process 8

2. FINDINGS AND MAJOR CONCLUSIONS 9
   - 2.1. Potential Threat Values 9
   - 2.2. Soil Aquifer Treatment Capacity 14
   - 2.3. Groundwater Degradation Potential 18
   - 2.4. Proposed Recycled Water Irrigation Screening Levels 21
   - 2.5. Best Management Practices 24
   - 2.6. Ongoing Monitoring Recommendations 25
   - 2.7. Further Study 27

PROJECT OVERVIEW
RECYCLED WATER STUDY

1. INTRODUCTION

This report presents the results of a study to evaluate how recycled water used for irrigation may affect groundwater resources in the Santa Clara and Llagas Groundwater Subbasins in Santa Clara County. The study was completed by Locus Technologies (Locus) on behalf of the Santa Clara Valley Water District (SCVWD), in five phases which are presented in Volumes I through V of this report. The recycled water study includes a series of evaluations to determine the potential for changes to groundwater quality from using recycled water for irrigation. The study includes a literature review, data analysis, soil model, bench test, pilot study, and an assessment of soil aquifer treatment capacity and groundwater degradation potential. In addition to these assessments, the study develops proposed recycled water irrigation screening levels, best management practices, and ongoing monitoring requirements.

1.1. Purpose

The use of recycled water for irrigation presents one of the best available opportunities for water conservation efforts for Santa Clara County. The water source is renewable and readily available, with a distribution network in place for many areas. However, previous studies have identified potential impacts to groundwater resulting from the use of recycled water. The overall goal of this study is to compile and obtain information that can be used to apply recycled water for irrigation in a manner that maintains protection of groundwater resources. This goal is consistent with objectives of the SCVWD and the California State Water Resources Control Board (SWRCB).

1.1.1. SCVWD Objectives

According to the Santa Clara Valley Water District Act, SCVWD objectives related to groundwater management are to recharge the groundwater basin, conserve water, increase water supply, and to prevent waste or diminution of the SCVWD's water supply, including the groundwater. The SCVWD Board of Directors has adopted policies to expand the use of recycled water and to aggressively protect groundwater quality. One of the SCVWD's water use efficiency programs is to increase use of recycled water which promotes effective use of water supply. The SCVWD has been involved in water recycling since the 1970s. Recycled water use in the county has grown from about 1,000 acre-ft in 1998 to over 15,000 acre-ft in 2008. The SCVWD implemented this study to gain a better understanding of how recycled water used for irrigation may affect groundwater quality so that measures may be implemented to ensure that future use of recycled water will continue to increase water supply while protecting groundwater quality.

1.1.2. State Water Resources Control Board Objectives

In May 2009, the SWRCB adopted a Recycled Water Policy, which includes a goal for California to increase recycled water use above 2002 levels by at least one million acre feet per year (afy) by 2020 and by at least two million afy by 2030. The expanded use of recycled water use for irrigation would assist in meeting these goals.

SWRCB's *Statement of Policy with Respect to Maintaining High Quality Waters in California* (SWRCB Resolution No. 68-16, also known as the State Antidegradation Policy) establishes that current groundwater quality will not be degraded to the point where beneficial uses are impacted. Therefore, the expanded use of recycled water for irrigation needs to be implemented in a manner that protects the quality of groundwater.

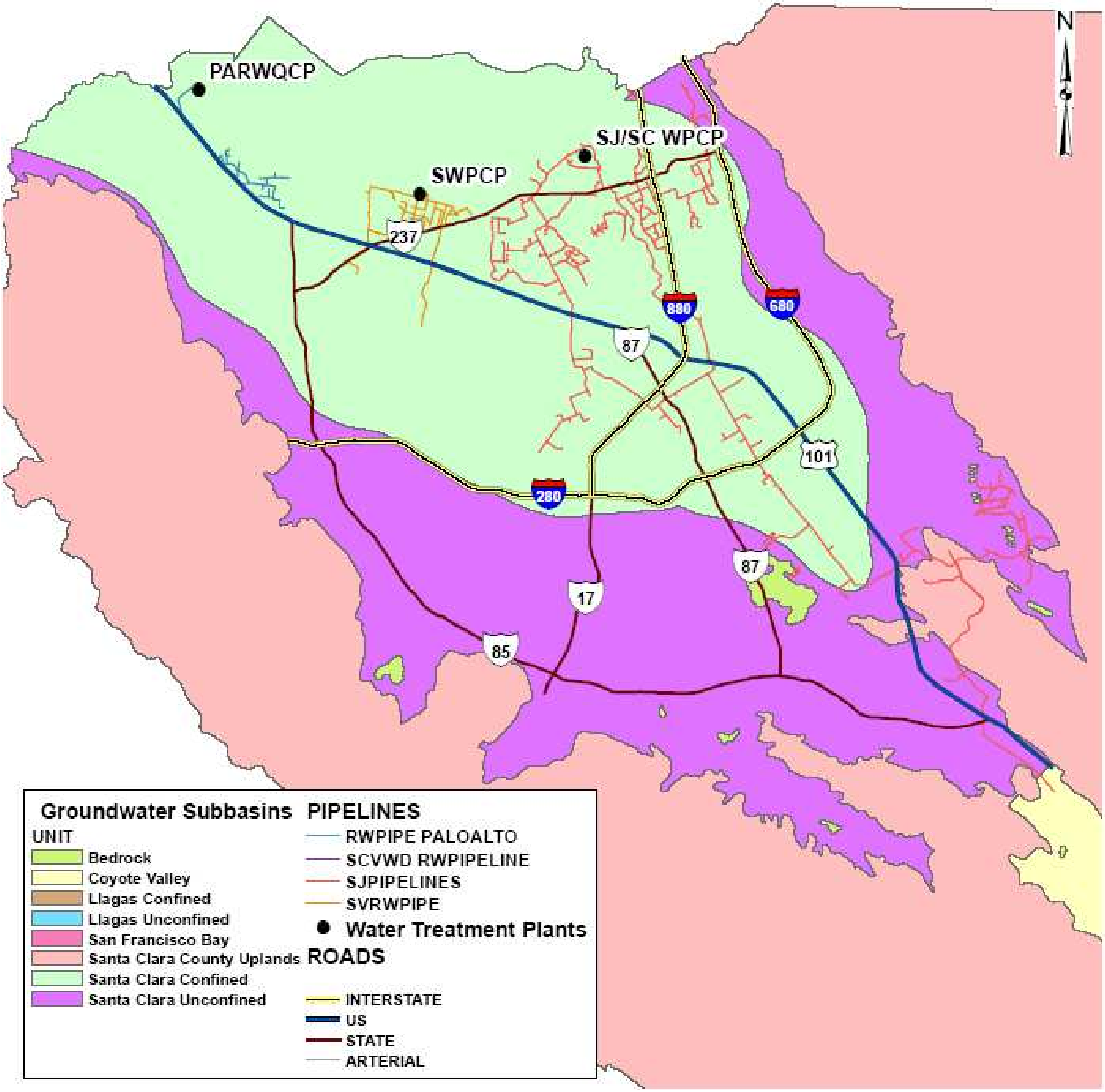
This study is designed to help expand the use of recycled water in Santa Clara County while protecting groundwater quality.

1.2. Project Study Area

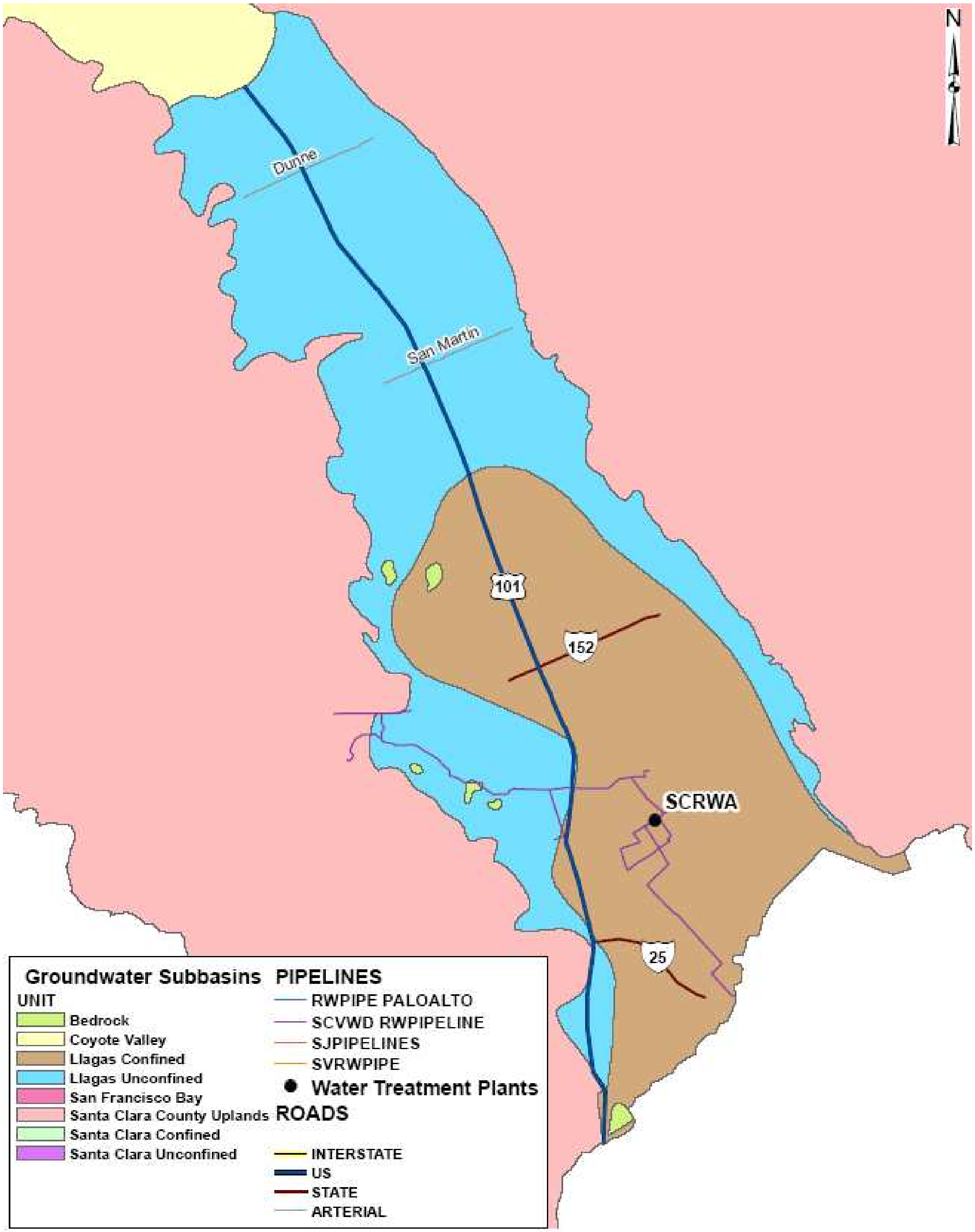
The study area for this project is defined by the Santa Clara and Llagas Groundwater Subbasins in Santa Clara County, California. The Santa Clara and Llagas Groundwater Subbasins contain both confined and unconfined areas. With few exceptions, current use of recycled water for irrigation in these groundwater subbasins is limited to confined areas, where a protective aquitard prevents direct percolation from the surface to groundwater. The overall goal of this study is to evaluate how the expanded use of recycled water for irrigation may affect groundwater quality in the Santa Clara and Llagas Subbasins. Potential impacts include changes in soil hydraulic conductivity and changes in groundwater quality.

The study area includes four sources of recycled water: Palo Alto Regional Water Quality Control Plant (PARWQCP), Sunnyvale Water Pollution Control Plant (SWPCP), San Jose/Santa Clara Water Pollution Control Plant (SJ/SC WPCP), and the South County Regional Wastewater Authority (SCRWA) in Gilroy. These four sources produce tertiary treated effluent that is currently being used within the study area. The figures below display the treatment plants in the study area and the current recycled water pipeline network.

Recycled Water Sources in Santa Clara Groundwater Subbasin:



Recycled Water Sources in Llagas Groundwater Subbasin:



1.3. Report Organization

This study includes several technical evaluations, which are organized into five volumes as follows:

1.3.1. Volume I: Literature Review and Data Analysis

The first phase of this study was a literature review, which assessed relevant recycled water studies, including those previously conducted by SCVWD. The literature review pooled current knowledge related to the fate and transport of recycled water, investigated the effects on soil permeability, identified areas where further investigation is needed, and identified investigative techniques to be used for the remainder of the study. The review also compiled a comprehensive list of constituents that have been previously detected in recycled water sources. The literature review is documented in Volume I of this report.

The data analysis is a review of the water quality of recycled water and groundwater in the study area. The available data analyzed, which originated from the District database, included groundwater samples from the Santa Clara and Llagas Subbasins and recycled water samples from the four treatment plants: PARWQCP, SWPCP, SJ/SC WPCP, and SCRWA. The analysis identified major constituents in recycled water and compared the quality to groundwater quality. The data analysis is documented in Volume I of this report.

The literature review and data analysis were used to determine which constituents should be sampled during the course of the study, including the bench test and pilot study.

1.3.2. Volume II: Soil Attenuation Model and Bench Test

As the next phase of the study, a numerical soil attenuation model was used to estimate the transport of tertiary treated recycled water constituents from the surface to groundwater. The one-dimensional model was run with scenarios in different soil types, with four recycled water constituents: bromodichloromethane, chloroform, N-nitrosodimethylamine (NDMA), and m-xylene. The model determined the attenuation of these constituents over time and depth. In addition, a sensitivity analysis was done to test the sensitivity of the different input parameters in the model. The soil attenuation model is documented in Volume II of this report.

A laboratory bench test was constructed to obtain actual physical and chemical data on recycled water transport through a range of local soil types in a controlled environment. Tertiary treated recycled water from the SJ/SC WPCP and SCRWA was applied to two-inch diameter soil cores for four months. The bench test was used to determine the permeability of varying soil cores with recycled water, quantify changes in the soil hydraulic conductivity from use of recycled water, and quantify the attenuation of recycled water constituents from percolation through the soil cores. The bench test is documented in Volume II of this report.

1.3.3. Volume III: San Jose Pilot Study

A full-scale pilot study of irrigation using tertiary treated recycled water from the SJ/SC WPCP was implemented and monitored at a site in San Jose, California. The selected pilot study site was a commercial office property with large areas of turf and other landscaping. The subsurface and irrigation characteristics were similar to many other sites within the study area that would be considered for future recycled water use. The pilot study monitored the quality of the irrigation water, pore water, and shallow groundwater to a depth of 30 feet over an 18-month period to evaluate the impact of recycled water constituents. The pilot study is documented in Volume III of this report.

1.3.4. Volume IV: Evaluation of Potential Impacts

Extrapolating data from the previous findings of the study, the soil aquifer treatment capacity and groundwater degradation potential were geographically rated, in a one to ten rating system (with ten being the worst case scenario), across the study area. Soil aquifer treatment capacity was defined in this study as the ability of the subsurface to naturally treat contaminants and is dependent on hydrogeological characteristics of a given area. The groundwater degradation potential was defined as the potential for groundwater to be impacted by recycled water used for irrigation based on the soil aquifer treatment capacity and the quality of the recycled water applied for a given area. The evaluation used is an adaptation of EPA's DRASTIC method utilizing geographic information system (GIS) software. The evaluation is documented in Volume IV of this report.

1.3.5. Volume V: Proposed Recycled Water Irrigation Screening Levels, Best Management Practices, and Ongoing Monitoring Recommendations

This volume of the report includes proposed recycled water irrigation screening levels (PRWISLs), best management practices (BMPs), and ongoing monitoring recommendations. PRWISLs are advisory levels for recycled water quality and are defined as the maximum concentration of a recycled water constituent at which the minimal groundwater degradation potential could be achieved. BMPs are effective and practical methods for using recycled water in irrigation that provide successful protection to groundwater resources. BMPs evaluated in this report are specific to recycled water use as an irrigation source for landscaping with the goal of minimizing the degradation of groundwater resources. Ongoing monitoring recommendations are established to provide timely recognition of any adverse changes in groundwater quality due to application of recycled water.

1.4. Review Process

This study was peer reviewed by an expert review panel consisting of three leading experts in recycled water and contaminant fate and transport. The expert review panel provides quality assurance in each phase of the study through technical guidance and direction. The following are the members of the expert review panel:

Dr. David L. Sedlak
Professor at Department of Civil and Environmental Engineering, University of California Berkeley

Dr. Joseph P. LeClaire
Principal Scientist at Wildermuth Environmental, Inc.

Jill Robinson Haizlip
Senior Geochemist at Geologica

2. FINDINGS AND MAJOR CONCLUSIONS

Overall, the findings from the study have indicated that within the Santa Clara and Llagas Subbasins, recycled water can be used as an irrigation source in a manner that protects the groundwater quality. However, the implementation of recycled water for irrigation should proceed with some considerations in order to minimize the potential groundwater degradation. The study has shown from the literature review, bench test, and the pilot study that there are numerous constituents found in recycled water, many of which have different fate and transport characteristics. Some constituents were observed in the study to not pose an impact to groundwater while others, such as perfluorochemicals (PFCs) and NDMA, prompt some concern due to their detection in shallow groundwater during the pilot study. It was determined from the soil aquifer treatment (SAT) capacity and groundwater degradation potential (GWDP) maps of the Santa Clara and Llagas Subbasins that the most ideal areas for recycled water irrigation are generally in the areas with a confining layer and deep groundwater. These areas are found in the northern section of the confined areas in the Santa Clara Subbasin and in the southern section of the confined areas in the Llagas Subbasin.

In light of the study findings, best management practices (BMPs), ongoing monitoring recommendations, and proposed recycled water irrigation screening levels (PRWISLs) were developed. Major best management practices (BMPs) include careful site selection (considering soil aquifer treatment capacity and other methods) and consideration of improved recycled water quality (i.e. dilution, source control, or additional treatment) particularly where recycled water quality is worse than PRWISLs. Ongoing monitoring is intended to provide timely recognition of any adverse changes in groundwater quality due to application of recycled water.

2.1. Potential Threat Values

Below is a table summarizing the potential threat to groundwater with respect to each constituent based on findings from the pilot study and bench test. Each constituent is given a rating between 1 and 5, with 5 representing the highest threat. The criteria for assigning each threat are the observed attenuation of the constituent in the pilot study and bench test and the type of constituent. In general, the greater the overall attenuation behavior displayed from the bench test and pilot study the lower the threat is. Also considered is whether the constituent is naturally occurring (which would results in a lower threat) or has known health impacts (resulting in a higher threat). The type of constituent can range from general water quality parameters like alkalinity and dissolved oxygen, to emerging contaminants such as NDMA and PFCs. The threat assigned for each constituent below is a culmination of these factors. While general water quality parameters are evaluated here in terms of threat, they are useful as indicators for water stability.

Some monitored constituents were not consistently detected in the recycled water source during the study. Since the attenuation of those constituents could not be evaluated, the threat value is assigned as inconclusive. Further monitoring of recycled water sources is needed to determine whether those constituents are sufficiently present to pose a threat to groundwater.

In addition to the threat value, the table includes a recommendation on whether further monitoring of each constituent is warranted. Constituents that are recommended for further monitoring are those with a threat value of three or higher or regarded as inconclusive. Bromide, which is regarded as a good tracer for recycled water, is also recommended for further monitoring.

Constituent	**Potential Threat**	**Findings**	**Recommend for Further Monitoring?**
ORP	1	ORP is a general water quality parameter. Measurements of ORP in the bench test and pilot study suggest no major shifts in redox conditions.	N
pH	1	The pH is a general water quality parameter. The pH was near neutral throughout the pilot study and bench test. Similarity of pH across depth has indicated stable conditions in each test.	N

Chlorine, Total	1	Concentrations of chlorine were higher in groundwater than in recycled water and pore water in the pilot study.	N
Dissolved Oxygen	1	DO is a general water quality parameter. DO was 0.01 mg/L or above across depth in the pilot study indicating that anoxic conditions were unlikely. Samples from the bench test indicated oxic conditions.	N
Alkalinity, Total	1	Alkalinity is a general water quality parameter monitored in the bench test and pilot study. A greater alkalinity in the pore water equates to more stability in pH conditions.	N
Bicarbonate Alkalinity	1		N
Boron	3	Boron removal was not well observed in the bench test or pilot study.	Y
Calcium	2	Calcium concentrations are greater in the subsurface than in the recycled water in the pilot study.	Y (See SAR)
Magnesium	2	Magnesium concentrations are greater in the subsurface than in the recycled water in the pilot study.	Y (See SAR)
Sodium	4	Sodium is directly related to SAR, as well as having a direct potential effect on groundwater.	Y
Sodium Adsorption Ratio (SAR)	4	The SAR may indicate impact to soil drainage from clay swelling as a result of recycled water application when the SAR in the recycled water is higher than the SAR of the previous irrigation source.	Y
Potassium	1	Potassium data from bench test and pilot study suggested good removal.	N
Sulfate	3	In the pilot study, sulfate increased in concentration in the pore water, likely due to the contribution from soil and fertilizer. Sulfate concentration in groundwater was relatively stable in the pilot study. In the bench test, removal was not well observed. The constituent also contributes to the total dissolved solids.	Y
Nitrite	2	Nitrate/Nitrite data showed removal with depth in the pilot study. The mechanism is suspected to be attenuation by root uptake pathway.	N
Nitrate	2		N
Chloride	4	Chloride over time has shown an increasing trend in concentrations in groundwater and pore water in the pilot study. At the end of the pilot study, chloride had not yet reached stable conditions. Attenuation of chloride in the bench test was not well observed. The constituent also contributes to the total dissolved solids.	Y

Total Organic Carbon (TOC)	2	TOC was decreased by microbial activity and adsorption to soil in the pilot study and bench test; groundwater was relatively stable in pilot study. The bench test findings were consistent with the pilot study.	N
Total Filterable Residue at 180C (TDS)	3	Although TDS in the pilot study in groundwater appeared relatively stable, levels have been observed above secondary drinking water standards in both the baseline and subsequent events. The TDS in recycled water and lysimeters are also above secondary drinking water standards. In the bench test, attenuation was not well observed.	Y
Dissolved Organic Carbon	2	DOC was decreased by microbial activity and adsorption to soil in the pilot study and bench test; groundwater was relatively stable in pilot study. The bench test findings were consistent with the pilot study.	N
Bromodichloromethane (THM)	2	Bromodichloromethane was removed in the vadose zone in the pilot study. Bromodichloromethane was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.	N
Bromoform (THM)	2	Bromoform was removed in the vadose zone in the pilot study. Bromoform was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.	N
Chloroform (THM)	2	Chloroform was removed in the vadose zone in the pilot study. Chloroform was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.	N
Dibromochloromethane (THM)	2	Dibromochloromethane was removed in the vadose zone in the pilot study. Dibromochloromethane was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.	N
Carbon Tetrachloride (VOC)	1	Carbon tetrachloride was not detected in recycled water in pilot study or bench test. The constituent was also categorized as having minimal potential impact in Volume I.	N
Xylenes, Total (VOC)	1	Xylenes were not detected in recycled water in pilot study or bench test. The constituent was also categorized as having minimal potential impact in Volume I.	N
Additional 8010-list VOCs	1	VOCs were not detected in recycled water in the pilot study or bench test. VOCs excluding xylene and carbon tetrachloride were also not detected in the data analysis of Volume I.	N

Haloacetic Acids (HAA6):	4	HAA6 were not observed in the baseline groundwater samples, but were observed in the applied recycled water, pore water, and groundwater during the pilot study. In the bench test, HAA6 attenuation was not well observed. HAA6 are also anthropogenic compounds.	Y
Bromochloroacetic Acid			
Dibromoacetic Acid			
Monobromoacetic Acid			
Monochloroacetic Acid			
Trichloroacetic Acid			
Heterotrophic Plate Count	3	Growth was present in pore water and groundwater in the pilot study. Growth was also observed in the bench test. Attenuation was not observed.	Y
Coliforms, Total	3	Growth was present in pore water and groundwater. Growth was also observed in the bench test. Attenuation was not observed.	Y
Fecal Coliforms	3	Fecal Coliforms were not present in groundwater during the pilot study. In the bench test, fecal coliforms were not frequently detected. Attenuation was not well observed.	Y
E. Coli	Inconclusive	E. Coli was minimally detected in recycled water in the pilot study. In the bench test, E. coli was not frequently detected. Therefore the attenuation behavior could not be examined. The constituent may be present in the other recycled water sources in the study area.	Y
N-Nitroso Dimethylamine (NDMA)	5	NDMA was not observed in the baseline groundwater samples, but was observed in the applied recycled water, pore water, and groundwater during the pilot study. The majority of attenuation of NDMA could potentially be from volatilization in the vadose zone and/or biotransformation in the soil. In the bench test, NDMA attenuation was not strongly observed. NDMA is an emerging contaminant.	Y
Perfluorochemicals	5	PFCs were not observed in the baseline groundwater samples, but were observed in the applied recycled water, pore water, and groundwater during the pilot study. Similarly, in the bench test, some PFCs were observed in the effluent but not in the influent. There is potential for PFC formation from precursors. PFCs are emerging contaminants.	Y
Phosphate	1	Phosphate removal was observed in the pilot study and bench test. Mechanisms that caused removal of phosphates are suspected to be the root uptake pathway and precipitation.	N
Ethylenediaminetetraacetic acid (EDTA)	3	EDTA was not detected in recycled water in the pilot study. In the bench test attenuation was not consistently observed.	Y

Surfactants (MBAS)	3	Surfactants were minimally detected in recycled water in the pilot study. In the bench test attenuation was not consistently observed.	Y
Bromide	2	Removal of bromide in the vadose zone is low in the pilot study; however the degree of toxicity of bromide is low. Together with chloride bromide can be used as a tracer for recycled water.	Y
Nitrilotriacetic acid (NTA)	Inconclusive	NTA was not detected in the pilot study or bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.	Y
Perchlorate	Inconclusive	Perchlorate was not detected in recycled water during the pilot study or bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.	Y
Cyanide	Inconclusive	Cyanide was minimally detected in pilot study or bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.	Y
Terbuthylazine	Inconclusive	Terbuthylazine was minimally detected in recycled water in pilot study and bench test. Therefore the attenuation behavior could not be fully examined. The constituent may be present in the other recycled water sources in the study area.	Y

2.2. Soil Aquifer Treatment Capacity

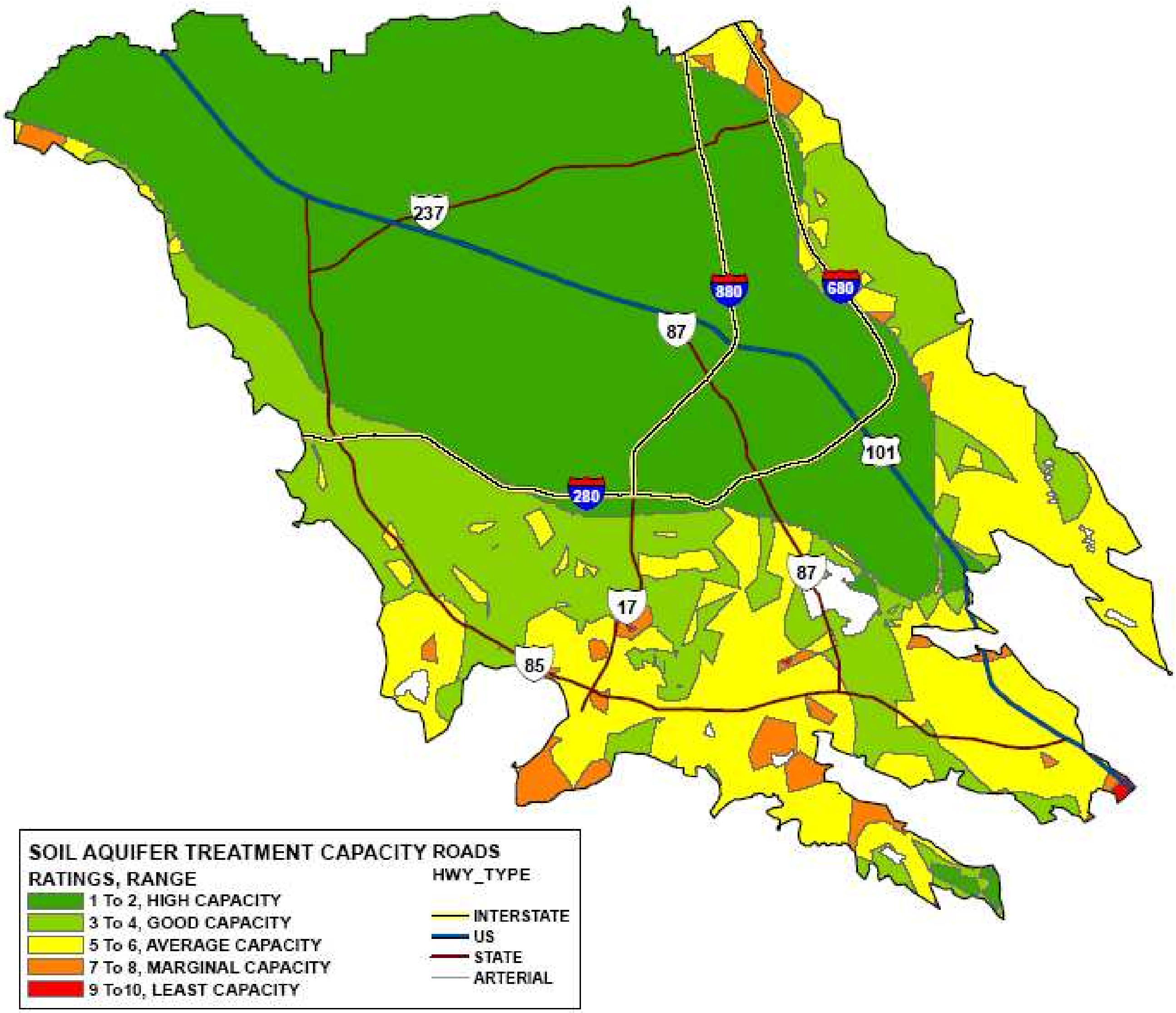
For this study, soil aquifer treatment capacity is defined as the ability of the vadose zone soil to naturally treat contaminants. The study focuses on contaminants found in recycled water. Mechanisms to lower the concentrations of contaminants include but are not exclusive to volatilization, dispersion, diffusion, sorption, precipitation, ion exchange, oxidation-reduction, transformation, and filtration. Soil aquifer treatment capacity is established from the hydrogeological characteristics of a given area.

Soil aquifer treatment capacity was determined for the entire study area on a scale of 1 to 10, with 1 representing areas with physical characteristics that are most ideal for the application of recycled water and protection of groundwater quality and 10 representing the least ideal areas.

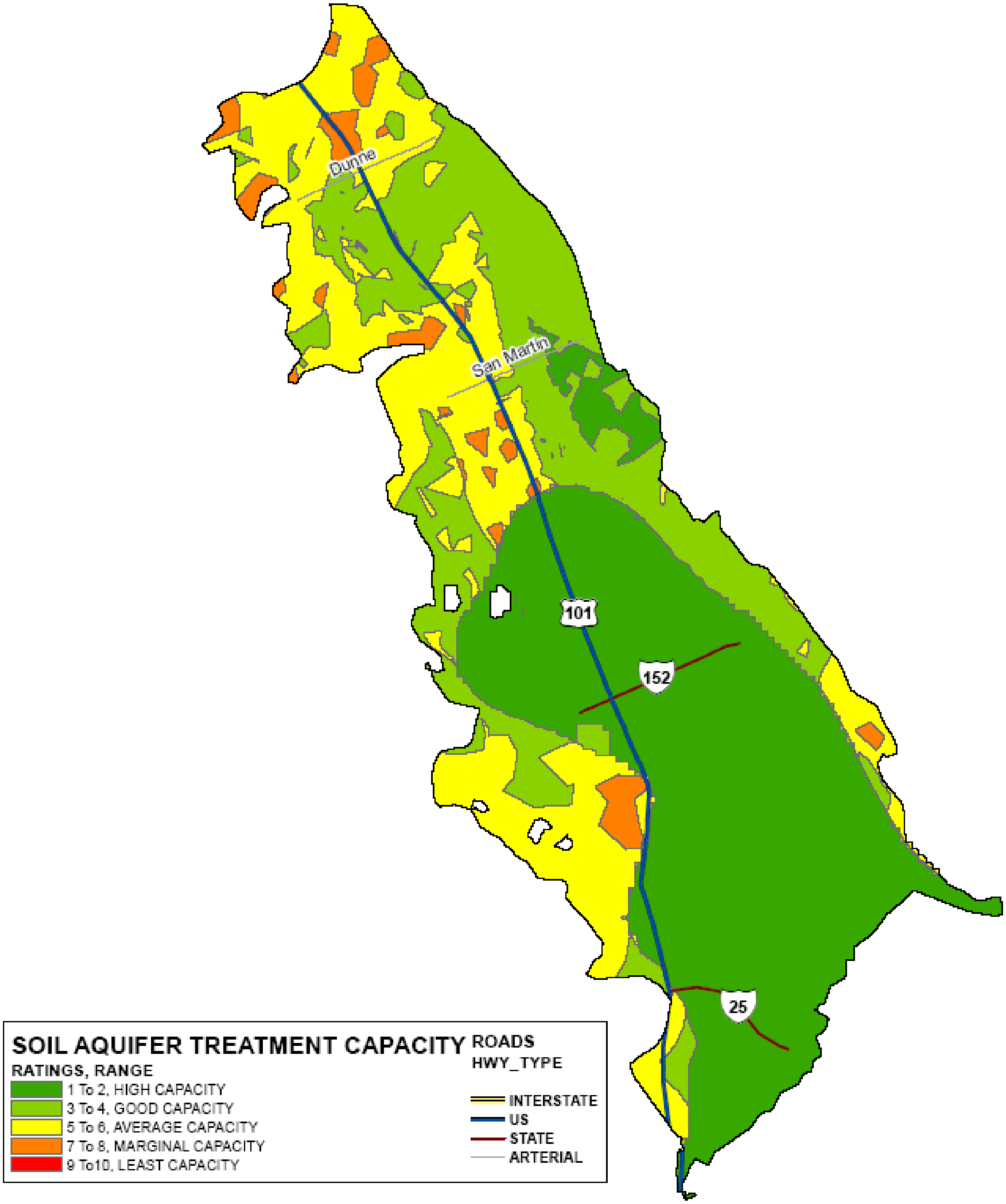
The SAT rating in the Santa Clara Subbasin ranges from 1 to 10. In the Llagas Subbasin, the SAT rating ranges from 1.5 to 9.5. In both subbasins, the confined areas were determined to have relatively high capacity due to the confining layer and deep groundwater. The unconfined areas were largely of good or average capacity. Only a few areas in the unconfined areas were regarded as having relatively marginal capacity and even fewer areas were regarded as least capacity. Areas with a lower rating tended to be characterized with a shallow depth to water and a coarse grain size distribution in the subsurface. The confining layer and deep depth to groundwater are characteristics of the most ideal areas within the study area for soil aquifer treatment capacity.

The following figures present the soil aquifer treatment capacity distribution in Santa Clara and Llagas Groundwater Subbasins.

Soil Aquifer Treatment Capacity for the Santa Clara Groundwater Subbasin:



Soil Aquifer Treatment Capacity for the Llagas Groundwater Subbasin:



2.3. Groundwater Degradation Potential

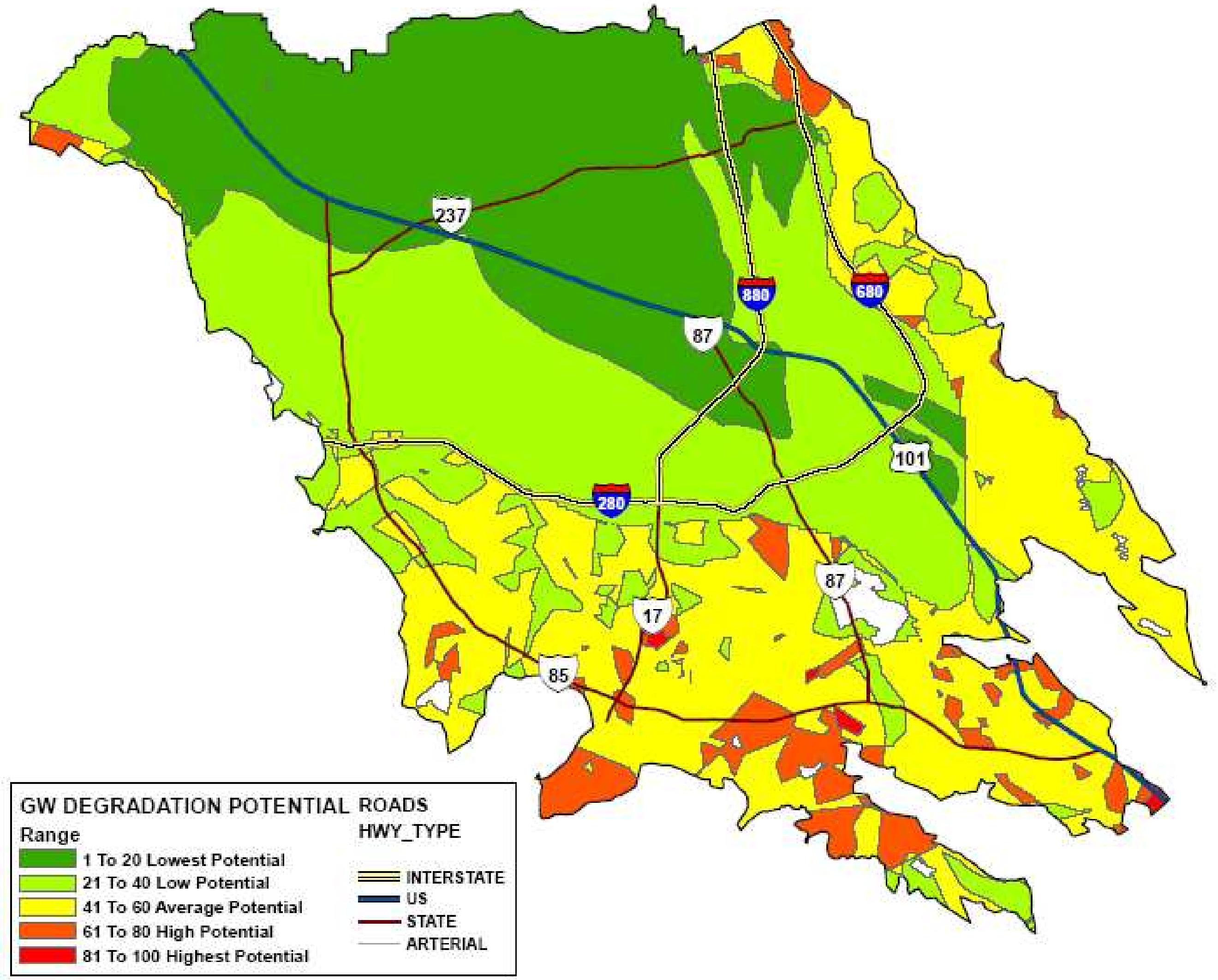
Groundwater degradation potential is defined as the potential for groundwater to be impacted by recycled water used in irrigation. Groundwater is regarded as degraded when the quality is worse than current groundwater quality as a result of irrigation, with consideration of the available assimilative capacity. For the purpose of this study, the available assimilative capacity is determined in a manner consistent with the SWRCB Recycled Water Policy by comparing current groundwater quality with applicable water quality standards, and calculating 20% of the difference between those two values. For constituents where the current groundwater concentration exceeds the water quality standard, there is zero available assimilative capacity for that constituent.

Groundwater degradation potential was determined for the entire study area on a scale of 1 to 100, with 1 representing ideal locations for irrigation with recycled water with regard to groundwater protection based on the area's physical characteristics and the quality of the local recycled water source. The maximum score of 100 represents the least ideal conditions for recycled water irrigation.

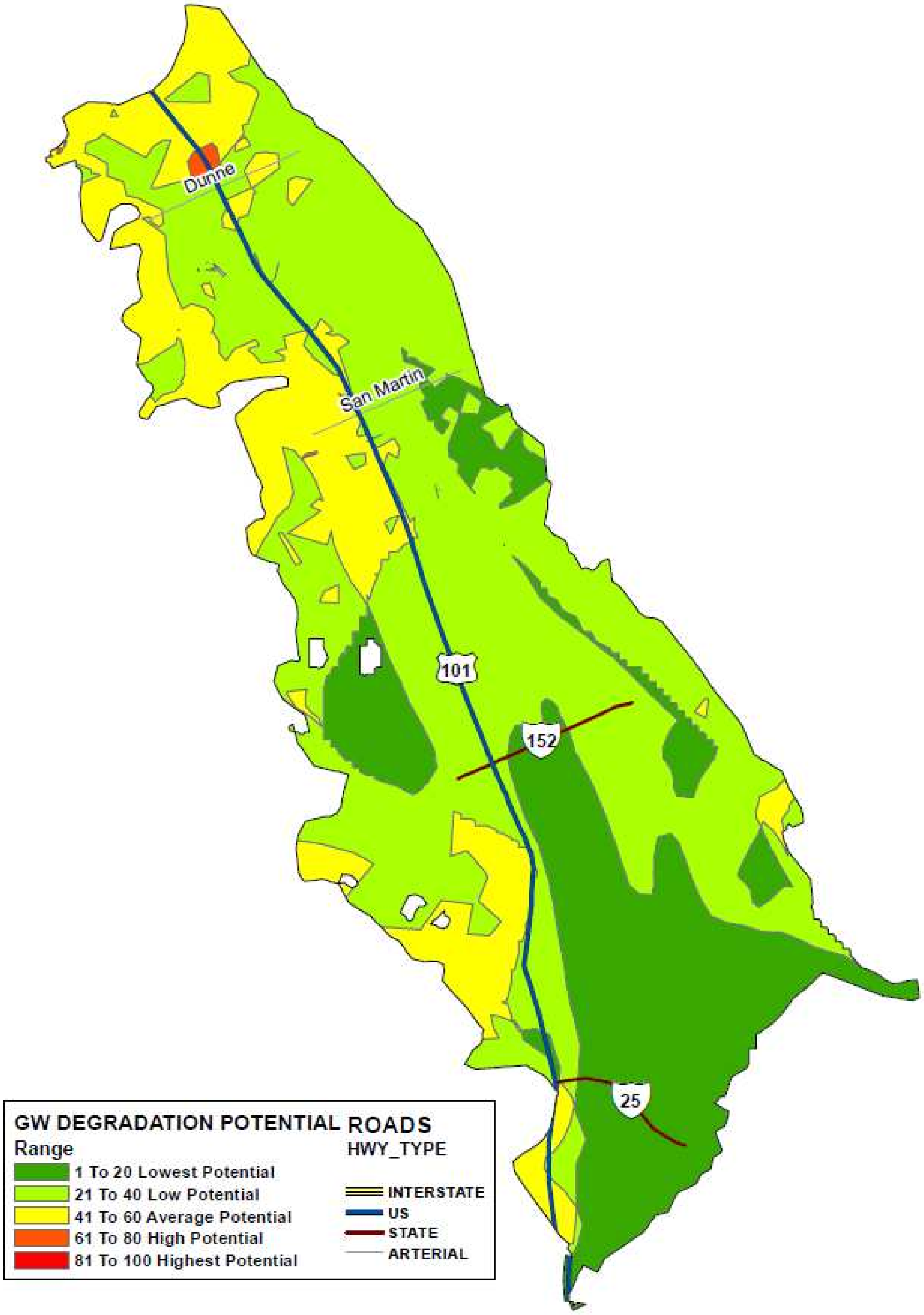
The groundwater degradation potential in the Santa Clara Subbasin is largely of lowest to average potential with a few areas regarded as high or highest. The rating in the Santa Clara Subbasin ranges from 8 to 96. Groundwater degradation potential in the Llagas Subbasin is largely of lowest to average potential and with a few areas regarded as high. The evaluation did not find any areas of the highest groundwater degradation potential in the Llagas Subbasin. In the Llagas Subbasin, the groundwater degradation potential rating ranges from 11 to 70. Comparatively, the Santa Clara and Llagas Subbasins share a similar distribution in groundwater degradation potential with a majority of lowest and low potential found in the confined areas and more average potential in the unconfined areas. Groundwater degradation potential was found to be generally low in the confined areas. Groundwater degradation potential in the unconfined areas was found to be generally average with some areas regarded as high or highest.

The distribution of the relative rating for groundwater degradation potential for the Santa Clara and Llagas Groundwater Subbasins is shown below.

Groundwater Degradation Potential for the Santa Clara Groundwater Subbasin:



Groundwater Degradation Potential for the Llagas Groundwater Subbasin:



2.4. Proposed Recycled Water Irrigation Screening Levels

Proposed recycled water irrigation screening levels (PRWISLs) are developed for irrigation, in conjunction with best management practices (BMPs) and ongoing monitoring recommendations, to protect groundwater quality. PRWISLs are based on the soil aquifer treatment capacity of a given area, the representative groundwater quality, and the constituent's potential threat level.

The PRWISL is defined as the maximum concentration of a recycled water constituent for irrigation at which minimal groundwater degradation potential can be achieved. The PRWISL of a given constituent is developed by assuming that the other recycled water constituents are equal to or less than the representative groundwater quality. The PRWISL of a single constituent represents the maximum tolerable concentration at which the target groundwater degradation potential can no longer be achieved independent of what the other constituent concentrations are. PRWISLs are advisory levels based on the findings from this study and may be used to help guide the use and expansion of recycled water. The inputs to the PRWISLs calculations are dependent on current groundwater quality and soil aquifer treatment capacity. Therefore, the applicable PRWISL varies depending on these two factors. Tables of PRWISLs for Santa Clara and Llagas Groundwater Subbasins are shown below.

If adequate site-specific information is available, the soil aquifer treatment capacity, groundwater degradation potential, and proposed recycled water irrigation screening levels can also be calculated directly.

Recycled Water Screening Levels for the Santa Clara Groundwater Subbasin:

		Santa Clara Subbasin				
		SAT zone: 1-2	SAT zone: 3-4	SAT zone: 5-6	SAT zone: 7-8	SAT zone: 9-10
Parameter	Units					
Biological						
Coliforms, Total	%	66.67%	66.67%	66.67%	44.91%	29.06%
E. Coli	%	20.00%	20.00%	7.57%	3.45%	2.24%
Fecal Coliforms	%	20.00%	20.00%	7.57%	3.45%	2.24%
Inorganics						
Boron	µg/L	505.00	505.00	505.00	505.00	505.00
Bromide	mg/L	0.38	0.38	0.38	0.38	0.38
Calcium	mg/L	69.20	69.20	69.20	69.20	69.20
Chloride	mg/L	320.00	320.00	277.81	187.73	151.00
Magnesium	mg/L	42.20	42.20	42.20	42.20	42.20
Nitrate as NO3	mg/L	122.00	122.00	122.00	122.00	122.00
Nitrite as NO2	mg/L	5.59	5.59	5.59	5.59	5.59
Phosphate	mg/L	14.13	14.13	14.13	14.13	14.13
Potassium	mg/L	32.00	32.00	32.00	32.00	32.00
Sodium	mg/L	230.00	230.00	121.58	82.15	66.08
Sulfate	mg/L	247.00	247.00	247.00	247.00	210.79
Emerging Contaminants and DBPs						
N-Nitroso Dimethylamine (NDMA)	ng/L	490.00	11.51	6.61	5.22	4.58
Perfluorochemicals (PFBA)	ng/L	12.00	12.00	12.00	12.00	12.00
Perfluorochemicals (PFOS)	ng/L	87.00	87.00	80.74	63.82	56.01
Perfluorochemicals (PFOA)	ng/L	109.00	109.00	109.00	109.00	106.93
HAA5	µg/L	263.00	75.48	42.85	35.90	33.06
Bromochloroacetic Acid	µg/L	36.90	6.94	2.75	1.86	1.50
Total THMs	µg/L	366.00	366.00	366.00	251.23	221.17
General Water Quality Parameters						
Dissolved Organic Carbon	mg/L	9.00	9.00	9.00	9.00	9.00
Total Organic Carbon (TOC)	mg/L	9.62	9.62	9.62	9.62	5.58
Parameters with Low Occurrence in the Pilot Study						
Cyanide	mg/L	0.06	0.06	0.06	0.06	0.06
Ethylenediaminetetraacetic acid (EDTA)	µg/L	305.00	305.00	305.00	305.00	223.53
NTA	µg/L	0.00	0.00	0.00	0.00	0.00
Perchlorate	µg/L	0.00	0.00	0.00	0.00	0.00
Surfactants (MBAS)	mg/L	0.36	0.36	0.36	0.36	0.36
Terbuthylazine	µg/L	0.10	0.10	0.10	0.10	0.10

Recycled Water Screening Levels for the Llagas Groundwater Subbasin:

		PRWISLs for Llagas Subbasin				
		SAT zone: 1-2	SAT zone: 3-4	SAT zone: 5-6	SAT zone: 7-8	SAT zone: 9-10
Parameter	Units					
Biological						
Coliforms, Total	%	66.67%	66.67%	66.67%	44.91%	29.06%
E. Coli	%	20.00%	20.00%	7.57%	3.45%	2.24%
Fecal Coliforms	%	20.00%	20.00%	7.57%	3.45%	2.24%
Inorganics						
Boron	µg/L	505.00	505.00	505.00	505.00	505.00
Bromide	mg/L	0.38	0.38	0.38	0.38	0.38
Calcium	mg/L	69.20	69.20	69.20	69.20	69.20
Chloride	mg/L	320.00	320.00	235.73	159.29	128.13
Magnesium	mg/L	42.20	42.20	42.20	42.20	42.20
Nitrate as NO3	mg/L	122.00	122.00	122.00	122.00	122.00
Nitrite as NO2	mg/L	5.59	5.59	5.59	5.59	5.59
Phosphate	mg/L	14.13	14.13	14.13	14.13	14.13
Potassium	mg/L	32.00	32.00	32.00	32.00	32.00
Sodium	mg/L	230.00	230.00	110.57	74.72	60.10
Sulfate	mg/L	247.00	247.00	247.00	247.00	190.00
Emerging Contaminants and DBPs						
N-Nitroso Dimethylamine (NDMA)	ng/L	490.00	11.51	6.61	5.22	4.58
Perfluorochemicals (PFBA)	ng/L	12.00	12.00	12.00	12.00	12.00
Perfluorochemicals (PFOS)	ng/L	87.00	87.00	80.74	63.82	56.01
Perfluorochemicals (PFOA)	ng/L	109.00	109.00	109.00	109.00	106.93
HAA5	µg/L	263.00	75.48	42.85	35.90	33.06
Bromochloroacetic Acid	µg/L	36.90	6.94	2.75	1.86	1.50
Total THMs	µg/L	366.00	366.00	366.00	251.23	221.17
General Water Quality Parameters						
Dissolved Organic Carbon	mg/L	9.00	9.00	9.00	9.00	9.00
Total Organic Carbon (TOC)	mg/L	9.62	9.62	9.62	9.62	5.58
Parameters with Low Occurrence in the Pilot Study						
Cyanide	mg/L	0.06	0.06	0.06	0.06	0.06
Ethylenediaminetetraacetic acid (EDTA)	µg/L	305.00	305.00	305.00	305.00	223.53
NTA	µg/L	0.00	0.00	0.00	0.00	0.00
Perchlorate	µg/L	0.00	0.00	0.00	0.00	0.00
Surfactants (MBAS)	mg/L	0.36	0.36	0.36	0.36	0.36
Terbuthylazine	µg/L	0.10	0.10	0.10	0.10	0.10

2.5. Best Management Practices

Best management practices (BMPs) are recommendations to maintain optimal use of recycled water for irrigation while protecting groundwater. BMPs evaluated in this report are specific to recycled water use as an irrigation source for landscape with the goal of minimizing degradation of groundwater resources. BMPs to help protect groundwater quality include:

- Improve Recycled Water Quality: Dilution with higher quality water (such as potable or advance treated water) may be an appropriate measure for areas where the quality of the recycled water is above proposed recycled water irrigation screening levels. In addition, source control such as modification to the treatment processes or investigation and elimination of constituent sources from the waste stream may be options for improving recycled water quality.
- Fertilizer Application: Reduced fertilizer application can minimize potential impacts of migration of nutrients found in recycled water to groundwater.
- Site Selection: Careful selection of sites for recycled water application, through use of soil aquifer treatment capacity, and other methods, is important for avoiding areas that have poor hydrogeological conditions for recycled water application and avoiding the mobilization of other contamination sources that may be present onsite.
- Irrigation Optimization: Optimizing the irrigation system minimizes the total volume of irrigation needed for application and consequently minimizes the mass loading of recycled water constituents.
- Salt and Nutrient Management Plan: The purpose of a salt and nutrient management plan is to protect groundwater from accumulating concentrations of salts and nutrients that would degrade the quality of groundwater and limit its beneficial uses.
- Gypsum Application: Gypsum application can promote soil drainage which is important in preventing water logging and possible runoff of recycled water to surface waters, but also accelerates migration of recycled water constituents to groundwater. Therefore, its use needs to be carefully balanced.

2.6. Ongoing Monitoring Recommendations

Recommendations for ongoing monitoring were developed to monitor the potential long term impacts to groundwater from use of recycled water for irrigation in the Santa Clara and Llagas Subbasins. The goal of the ongoing monitoring is to provide timely recognition of any adverse changes in groundwater quality due to application of recycled water. This monitoring schedule serves as a general guideline for monitoring activities. Future modifications to this monitoring approach may be appropriate to optimize this program.

Site-specific data can be used to directly calculate the groundwater degradation potential to help determine if additional monitoring is needed. The use of this data, along with available groundwater monitoring results from areas with similar physical and recycled water quality characteristics may reduce the need for additional monitoring.

The following is a summary of proposed criteria for achieving adequate monitoring:

1) Select or install wells at or adjacent to sites where recycled water irrigation is implemented. Monitoring wells should be downgradient of the application area.

2) While not every irrigation site needs to be monitored, at least one should be monitored to represent each region of expansion with similar calculated GWDP values. If a region of expansion contains different rating categories of GWDP, consider monitoring an irrigation site in each unique subregion.

3) Monitoring wells between application areas and production wells will be useful in monitoring water quality that may affect production.

4) Monitor for the groundwater of interest (i.e. in the principal aquifer) and in shallower aquifers. Shallower aquifers can provide an early indication of changes in water quality.

5) Avoid monitoring wells that are screened in multiple aquifers, since samples would effectively be an average groundwater concentration across multiple aquifers.

6) Use denser monitoring well spacing in areas of higher GWDP where groundwater degradation is most likely to occur.

Below is a recommended schedule of groundwater sampling, with the year indicating the amount of time after recycled water application begins:

Highest Groundwater Degradation Potential in Represented Area	Monitoring Frequency		
	Year 1	Year 2-4	Year 5 and beyond
1-20	Quarterly	Semi-annually in spring and fall	Annually in fall
21-40	Quarterly	Quarterly	Semi-annually in spring and fall
41-60	Monthly	Quarterly	Semi-annually in spring and fall
61-100	Monthly	Quarterly	Quarterly

After a period of monitoring events, if evaluation of the data obtained demonstrates that the quality of groundwater has not degraded past 20 percent of the assimilative capacity and does not show an increasing trend, consideration may be given to reducing the groundwater monitoring scope by decreasing the monitoring frequency or the number of wells monitored. Reduced groundwater monitoring scope should still be within reason to adequately ensure groundwater quality is maintained. Before a reduction in monitoring scope, trend analysis with forward projection of the groundwater concentrations should be used to demonstrate that the concentrations will not exceed 20 percent of the assimilative capacity over a longer time frame. Conversely, if adverse impacts are encountered in a specific area the monitoring scope can be adjusted to increase in frequency or in the number of wells monitored in the specific area.

Recycled water monitoring is recommended for wastewater treatment plants in order to verify that recycled water quality does not change over time. If recycled water quality worsens over time, additional measures, such as dilution or source control as specified in BMPs should to be implemented in order to maintain the same level of groundwater protection. At minimum, annual monitoring of recycled water is recommended from each wastewater treatment plant that provides recycled water for irrigation use. More frequent monitoring of recycled water may be useful for determining seasonal changes in the water quality, or evaluating water quality changes when improvements in the treatment process are implemented. During the pilot study, as discussed in Volume III, constituent concentrations in recycled water were observed to vary within the distribution system. Therefore, it is recommended that samples are collected at various points in the distribution system to evaluate the quality of recycled water being applied for irrigation. Samples should be collected at the irrigation site closest to the recycled water source, and at the irrigation site furthest from the recycled water source.

2.7. Further Study

The conclusions made in this report are supported with the findings from the evaluations conducted in this study using the best professional judgment. Further monitoring and additional site-specific data can strengthen and refine the findings of this report. Further monitoring of recycled water constituents, particularly the emerging contaminants for which limited data are currently available, will increase sample size, which could be used to more accurately evaluate concerns such as groundwater degradation potential. Groundwater monitoring is ongoing at the pilot study site, and those results should be considered along with the findings of this study. Additional studies, such the ongoing monitoring of the recycled water irrigation at the pilot study site, pilot testing of areas within the study area with hydrogeological settings different from those found in at the IDT site, could also help verify and/or update the findings of this study. Additional study of recycled water in the deeper zones may be appropriate where impacts have occurred in the shallow zones.

Volume I
Literature Review and Data Analysis

Recycled Water Irrigation and Groundwater Study
Santa Clara and Llagas Groundwater Subbasins
Santa Clara County, California

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FLORIDA

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TABLE OF CONTENTS

LIST OF TABLES .... I-iv
LIST OF APPENDICES .... I-v
LIST OF ACRONYMS AND ABBREVIATIONS .... I-vi

1. INTRODUCTION 1
    1.1. Purpose 1
    1.2. Volume I Organization 2
    1.3. Approach 3

2. CONSTITUENTS OF RECYCLED WATER 4
    2.1. Methodologies 4
        2.1.1. Data Sources 4
        2.1.2. Data Analysis 5
        2.1.3. Parameter Categorization 7
    2.2. General Water Quality 8
        2.2.1. pH and Alkalinity 8
        2.2.2. Hardness 10
        2.2.3. Turbidity 10
        2.2.4. Total Dissolved and Suspended Solids 11
        2.2.5. Dissolved and Total Organic Carbon 12
        2.2.6. Redox Potential and Dissolved Oxygen 13
        2.2.7. Silica 15
    2.3. Cations and Anions 15
        2.3.1. Transition and Post-Transition Metals 15
            2.3.1.1. Iron 16
            2.3.1.2. Lead 16
            2.3.1.3. Nickel 17
            2.3.1.4. Cadmium 18
            2.3.1.5. Copper 18
        2.3.2. Other Ions 19
            2.3.2.1. Boron 19
            2.3.2.2. Cyanide 20
            2.3.2.3. Fluoride 20
            2.3.2.4. Calcium, Magnesium, Sodium, Chloride, and Sulfate 21
    2.4. Nutrients 23
        2.4.1. Phosphate 23
        2.4.2. Nitrate and Nitrite 24
    2.5. Anthropogenic Compounds 25

2.5.1. Disinfection By-Products (DBPs) ... 26
2.5.1.1. Trihalomethanes (THMs) ... 26
2.5.1.2. Haloacetic Acids (HAA5) ... 27
2.5.1.3. N-Nitrosodimethylamine (NDMA) ... 29
2.5.1.4. Bromate ... 30
2.5.2. Pesticides and Associated Chemicals ... 31
2.5.2.1. Lindane (Gamma-BHC) ... 32
2.5.2.2. Heptachlor Epoxide ... 32
2.5.2.3. Aldicarb Sulfoxide ... 33
2.5.2.4. Terbuthylazine ... 33
2.5.3. Hormones and Pharmaceutically Active Compounds (PhACs) ... 34
2.5.4. Industrial Chemicals ... 36
2.5.4.1. Volatile Organic Compounds (VOCs) ... 36
2.5.4.2. 1,4-Dioxane ... 38
2.5.4.3. Plasticizers ... 38
2.5.4.4. Perfluorochemicals (PFCs) ... 39
2.5.4.5. Nitrilotriacetic acid (NTA) and Ethylenediaminetetraacetic Acid (EDTA) ... 40
2.5.4.6. Naphthalenedicarboxylic Acids (NDCs) ... 41
2.5.4.7. Perchlorate ... 41
2.5.4.8. Hexachlorocyclopentadiene ... 42
2.5.4.9. Methyl Tertiary-Butyl Ether (MTBE) and Other Oxygenates ... 43
2.5.4.10. Organophosphates ... 43
2.5.4.11. Surfactants ... 44
2.6. Pathogens ... 48
2.6.1. Bacteria and Parasites ... 48
2.6.2. Viruses ... 50
2.7. Radioactives ... 51
2.8. Conclusions ... 53

3. SOIL AQUIFER PLUGGING ... 54
3.1. Clay Expansion / Dispersion ... 54
3.2. Other Plugging Mechanisms ... 55
3.2.1. Mineral Precipitation ... 55
3.2.2. Physical Plugging ... 56
3.2.3. Biological Plugging ... 56
3.3. Conclusions ... 56

4. MODELING TOOLS ... 58
4.1. PHREEQ ... 58
4.2. HYDRUS ... 59

4.3. MINTEQA2 61
4.4. Soil Attenuation Model (SAM) 62
4.5. Recommendations 63

REFERENCES 64

TABLES
APPENDICES

LIST OF TABLES

TABLE NO.	TITLE
I-2-1	List of Chemicals Analyzed in Recycled Water Sources
I-2-2	Recycled Water Chemistry
I-2-3	Sodium Adsorption Ratio

LIST OF APPENDICES

APPENDIX NO.	TITLE
I-A	Histograms for Groundwater and Recycled Water Chemistry
I-B	Box Plots for Groundwater and Recycled Water Chemistry
I-C	Box Plots for Additional Recycled Water Constituents

LIST OF ACRONYMS AND ABBREVIATIONS

ACRONYM	DESCRIPTION
APECs	alkylphenol ethoxycarboxylates
APEOs	alkylphenol ethoxylates
AP1ECs	alkylphenoxy acetic acids
AP1EO	alkylphenol mono-ethoxylate
AP2EO	alkylphenol di-ethoxylate
AP3EO	alkylphenol tri-ethoxylate
APs	alkylphenols
ARWT	Advanced Recycled Water Treatment
AWWA	American Water Works Association
BOD	biological oxygen demand
BPA	bisphenol-A
CA MCL	California MCL
CAPECs	carboxyalkylphenol ethoxycarboxylates
CAP1ECs	carboxyalkylphenoxy acetic acids
CW2D	Constructed Wetlands 2D
DBPs	disinfection by-products
DEHP	di(2-ethylhexyl)phthalate
DOC	dissolved organic carbon
EDCs	endocrine disrupting compounds
EDTA	ethylenediaminetetraacetic acid
HAA5	haloacetic acids
LACSD	Los Angeles County Sanitation District
Locus	Locus Technologies
MBAS	methylene blue active substances
MCL	Maximum Contaminant Level
m/z	mass-charge ratio

LIST OF ACRONYMS AND ABBREVIATIONS

NBBS	N-butyl benzenesulfonamide
NCSWS	National Center for Sustainable Water Supply
NDCs	Naphthalenedicarboxylic Acids
NDMA	N-nitrosodimethylamine
NICNAS	National Industrial Chemicals Notification and Assessment Scheme
NOM	natural organic matter
NP	nonylphenol
NTA	nitrilotriacetic acid
OP	octylphenol
ORP	oxidation reduction potential
PAHs	polycyclic aromatic hydrocarbons
PARWQCP	Palo Alto Regional Water Quality Control Plant
PFCs	perfluorochemicals
PhACs	pharmaceutically active compounds
SAM	Soil Attenuation Model
SAR	sodium adsorption ratio
SCRWA	South County Regional Wastewater Authority
SCVWD	Santa Clara Valley Water District
SJ/SC WPCP	San Jose/Santa Clara Water Pollution Control Plant
SWPCP	Sunnyvale Water Pollution Control Plant
TDS	total dissolved solids
THMs	trihalomethanes
TOC	total organic carbon
TSS	total suspended solids
USEPA	United States Environmental Protection Agency
USGS	United States Geological Survey
VOCs	volatile organic compounds
µg/L	micrograms per liter

VOLUME I
LITERATURE REVIEW AND DATA ANALYSIS
RECYCLED WATER STUDY

1. INTRODUCTION

This report presents the results of a study to evaluate the impacts of recycled water on groundwater resources in the Santa Clara and Llagas Groundwater Subbasins in Santa Clara County. The study was completed by Locus Technologies (Locus) on behalf of the Santa Clara Valley Water District (SCVWD). This study used a combination of approaches, including literature review, data analysis, fate and transport evaluations, and a full pilot study at a site in the Santa Clara Groundwater Subbasin. Volume I includes the first of these approaches, the literature review and the data analysis, which includes 1) available data from related studies that can be used for this project, 2) relevant hydrogeological data, 3) methodologies proposed for assessing impact to groundwater from recycled water, 4) available geochemistry of recycled water, including a prioritized list of chemicals of concern.

1.1. Purpose

Volume I covers two major components of this study: literature review and data analysis. The purpose of the literature review is to collect and summarize relevant recycled water studies in Santa Clara County, including studies previously conducted by the SCVWD. In addition, literature related to recycled water and relevant studies were reviewed. The goals for the literature review were identified as the following:

- Determine the range of characteristics of recycled water found in recycled water from the four producers (common chemical and biological constituents that should be evaluated in this study);
- Investigate the effects of soil permeability from recycled water;

- Review conclusions of previous relevant studies, and determine areas that require further investigation (i.e. chemicals that lack information in terms of fate and transport); and
- Identify investigative techniques (e.g. modeling tools) that could be used for the remainder of the study.

Part of determining the range of characteristics of recycled water involves a data analysis. The purpose of the data analysis is to review available data related to hydrogeology, recycled water, and groundwater quality. The data will be used to observe the fate and transport of identified chemicals of concern. The data analysis evaluated the overall quality of recycled water using data from the four producers (i.e. PARQWCP, SWPCP, SJ/SC WPCP and SCRWA) which have varying recycled water qualities. Similarly, the data analysis evaluated the overall quality of groundwater using data from the two subbasins (ie Santa Clara and Llagas) which have varying groundwater qualities. The following goals were identified for the data analysis:

- Identify which constituents have been detected in recycled water sources;
- Determine the frequency of detection of each constituent in recycled water;
- Determine the maximum, minimum, and representative concentration of each constituent in recycled water;
- If available, compare recycled water constituent concentrations with available groundwater chemistry data from the Santa Clara and Llagas Groundwater Subbasins, and evaluate the overall difference in water quality; and
- Identify constituents which may or may not have the potential to impact groundwater quality based on significantly higher overall concentrations.

1.2. Volume I Organization

During the course of the literature review, three overall subjects were found to be prevalent in previous studies of recycled water application for irrigation. This volume of the report is subdivided into these three subjects. The first subject is the origin, fate, and transport of chemical and biological constituents commonly found in recycled water. To consolidate the available information for each constituent, the results of the data analysis are discussed in Section 2 of this volume along with the literature review information for each constituent. The second subject is a general evaluation of the potential for soil plugging that can occur when using recycled water for irrigation. The final subject is the evaluation and use of modeling tools for predicting the fate and transport of chemicals through the unsaturated vadose zone. These subjects are addressed in Sections 3 and 4, respectively, of this volume of the report.

1.3. Approach

Resources for the literature review were identified through SCVWD as well as other experts in the field of recycled water application. Based on previous relevant SCVWD reports and the advice of an expert panel, Locus prepared a list of key topics for locating references. The topics were used with online resources such as the U.S. Salinity Laboratory (*http://www.ars.usda.gov/main/main.htm*), and conventional sources including local university libraries. Using this approach, Locus maximized use of available resources to address the goals of this study. The literature review was conducted in 2007 at the beginning of this study. However, the review does include updates using selected literature as current as 2009 as part of the review process for this document.

For the data analysis, the ranges of concentrations for each constituent were compared between populations of recycled water from the four local sources and groundwater samples from the Santa Clara and Llagas Groundwater Subbasins. SCVWD provided available chemistry data for groundwater and recycled water samples in electronic and hard copy laboratory reports. The results were compiled into histograms or box plots depending on the amount of data available and plotted for comparison.

To prioritize the chemicals in recycled water, categories were developed to distinguish chemicals that may have a greater potential to impact groundwater than others. The categories were developed based on the available fate and transport information for the constituents in recycled water and the available data analyses.

2. CONSTITUENTS OF RECYCLED WATER

Recycled water commonly contains a number of unique chemical and biological constituents introduced through the original use of the water, or through the treatment processes that the water undergoes after use. One major goal of this study is to determine whether any of these constituents have the potential to negatively impact groundwater if recycled water is used for irrigation. In this section, each of these constituents is discussed, either individually or as a group of related constituents as appropriate.

2.1. Methodologies

The data analysis for each constituent includes a comparison between recycled water and groundwater quality data. The methods used to make this comparison are discussed below.

2.1.1. Data Sources

For the data analysis, SCVWD provided available water quality data for historic groundwater and recycled water samples. Historic groundwater data includes data from the SCVWD database, including data from the City of San Jose's Groundwater Monitoring and Mitigation Program (GMMP), which has sampled from numerous monitoring wells in the Santa Clara County. The date range of the historic groundwater data is from 1973 to 2007, and includes data from the shallow and deep aquifers. Both shallow and deep groundwater were included to adequately represent groundwater concentrations. Recycled water data used in the evaluation ranged from 2001 to 2007. The data were not reviewed for quality assurance/quality control (QA/QC) as part of this project and are assumed to have met the SCVWD quality assurance and quality control requirements.

Many data were available in electronic form, but some, particularly the recycled water analyses, were only available in hard copy laboratory reports. In order to adequately represent every constituent of recycled water, some manual data entry was required for the statistical analysis. First, the laboratory reports were reviewed to identify each constituent that had been detected in at least one of the recycled water samples.

The laboratory reports included many analyses, but there were many analytes that were not detected in any samples. To minimize the manual data entry, constituents that were not detected in any recycled water samples were not tabulated. A complete list of all chemicals that were analyzed in the recycled water from the SCVWD database is presented in Table I-2-1. Results for each parameter that was detected in at least one of the recycled water samples are presented in Table I-2-2.

SCVWD maintains a large database of groundwater quality information, which was used to identify the representative characteristics of groundwater in the Santa Clara and Llagas Groundwater Subbasins. Some of the hard copy laboratory reports provided by SCVWD included groundwater samples that were not entered in the database. However, for most of the analytes in the laboratory reports, the existing SCVWD database already includes a large amount of groundwater quality data. Many of the monitoring parameters have thousands of records in the database. Therefore, the additional benefit of manually adding the approximately twenty samples from the laboratory reports was minimal. Data for constituents found in the laboratory reports but not in the SCVWD database were manually entered so that some representation of groundwater quality could be obtained.

2.1.2. Data Analysis

Once the available chemistry data for groundwater and recycled water were compiled, exploratory statistical analyses were applied to the data. Using the SCVWD groundwater quality database, histograms were prepared for each constituent detected in recycled water. For this analysis, concentration values below detection were considered zero values. This simplification of the data set was necessary to avoid skewing the histograms, since there is a significant amount of variability in the reporting limits in the database. The use of the reporting limit or half the reporting limit is common in statistical analyses of this type, but for this analysis it would show false variability for nondetect values. Another simplification used for this study was to consider all available concentration data equally. That is, no consolidation was made for multiple samples collected from the same well or at the same time. However, given the large data count for the groundwater samples, the potential error caused by this simplification is minimal.

Groundwater chemistry histograms are shown in Appendix I-A. For many constituents, the histograms provide a good representation of the range of concentrations in groundwater. The histograms are scaled so that the majority of the data are visible on the plot. Some data outliers may not be represented, but the scale presents the best resolution for most of the data. The histograms are less useful for some constituents that are infrequently detected in groundwater, where almost all of the data are plotted as zero values. For these constituents, it is useful to review the summary statistics included on each histogram. Summary statistics calculated for each constituent include the minimum, maximum, median, mean, count, and frequency of detection are provided in figures found in the appendices and within the text of Section 2.

Recycled water chemistry data are also presented on each of the groundwater histograms in Appendix I-A. Due to the small number of recycled water samples available for this study, a full histogram of the data does not return useful results. However there were a sufficient number of samples to prepare simplified box plots of the data, showing the minimum, maximum, and median concentrations. For these box plots, the median was selected as the most representative concentration as opposed to the mean, since it is not impacted by outliers in the data set. However, the mean and other summary statistics for recycled water are also presented on the histogram for comparison.

Appendix I-B includes box plots for additional constituents where there was insufficient data (less than 40 data values) to prepare a histogram. These constituents are not commonly monitored in groundwater, therefore there is a limited amount of data for them. However, some groundwater samples collected as part of the SCVWD Advanced Recycled Water Treatment (ARWT) Feasibility Project were analyzed for these constituents, and there is a sufficient number of results to perform the comparison.

During the data analysis, three recycled water constituents were identified for which there were no corresponding groundwater analyses. These constituents are presented with only recycled water data in Appendix I-C.

2.1.3. Parameter Categorization

Constituents are prioritized based on their potential to negatively impact the beneficial uses of groundwater. A beneficial use includes municipal, domestic, industrial, and irrigation. Five categories were developed to classify constituents. The classification of these constituents is based on the current available knowledge of fate and transport characteristics and on the results from the data analysis. The five categories are:

A) Significant Potential for Impact. The fate and transport characteristics and data analysis suggest that the constituent may negatively impact ground water.

B) Important Parameter. Although this constituent may not directly impact groundwater, it is useful to monitor because it can influence other constituents.

C) Inconclusive. Different studies concerning the same constituent present conflicting information on fate and transport characteristics or based on the constituent's characteristics, it is still unknown how groundwater may be impacted.

D) Minimal Potential for Impact. Groundwater is not likely to be impacted because 1) the fate and transport characteristics suggest that the constituent has a high affinity for attenuation and/or 2) the concentration in recycled water is less than or similar to the concentration found in groundwater or less than water quality standards. Therefore, recycled water cannot impact the constituent concentrations in groundwater.

E) Insufficient Information. There is not enough information concerning the fate and transport of the constituent to evaluate the potential impacts to groundwater.

The assigned categories for each of the evaluated constituents were used as a guide for to develop monitoring plans for the bench test and pilot study, which are described in Volumes II and III, respectively .

2.2. General Water Quality

General water quality parameters are typically inexpensive to monitor. Many of these parameters can be easily monitored in the field, and can provide an overall indication of water quality. In addition, these parameters provide critical information about the chemistry of the water and how constituents may react with the environment when applied as irrigation water. Many of the parameters discussed below are reactive either with soil, in-situ waters, and/or plants depending on the water chemistry. Therefore, the general water chemistry provides a basis for understanding the potential fate and transport of recycled water constituents through the vadose zone to groundwater even if the parameters themselves do not represent potential constituents of concern to groundwater.

2.2.1. pH and Alkalinity

The ARWT Feasibility Project reported that pH from surface water, groundwater, and recycled water were found to be near neutral (SCVWD, 2004). The data analysis performed for this project confirms this conclusion, as shown in the histogram in Appendix I-A. The median pH value is slightly lower for recycled water, but the range of pH values for recycled water is still within the range for the majority of groundwater values.

One study in Florida using recycled water for irrigation of several golf courses found that the pH of recycled water ranged from 5.3 to 8.7, which was similar but more variable than the pH of the local groundwater. The study also found that the pH was lower in groundwater at golf courses irrigated with recycled water compared to those irrigated with local well water, although the mechanism for that difference was not determined (United States Geological Survey [USGS], 1996). As with any irrigation water, the pH of recycled water used for irrigation may change during exposure to the environment through reactions between the dissolved constituents and the environment. Direct comparison of recycled water pH and groundwater pH may not be an accurate method of evaluating the potential effects, although establishing pH is important for understanding the fate and transport of other recycled water constituents.

Another potential issue associated with the pH of water used for irrigation is the potential for additional solubilization of metals. The amount of metals that can be leached from soil is highly dependent on the pH of the infiltrating water. Lower pH values have the potential to mobilize metals out of the soil. However, the median pH observed in recycled water samples from the data analysis is 7.4, which is above neutral. Therefore, infiltration of recycled water with this pH is not expected to have a significant effect on the mobilization of metals.

Alkalinity is the measure of the ability of water to neutralize acids, caused by the presence of hydroxide, carbonate, and bicarbonate anions. High alkalinity indicates a resistance to changes in pH. In a Florida study using recycled water for irrigation of several golf courses, alkalinity was found to be lower in groundwater at golf courses irrigated with recycled water compared to those irrigated with local well water (USGS, 1996).

Recycled water samples included in the data analysis showed pH values ranging from 6.5 to 8.1, with a median value of 7.4. The groundwater samples tend to be slightly more basic, with a median of 7.7. The total alkalinity and bicarbonate alkalinity values for recycled water samples are similar to the groundwater samples. Since both pH and alkalinity values are similar for recycled water and groundwater, there is very little potential for recycled water application to affect the pH of groundwater. However, these parameters are ranked as category B) Important Parameters because they are useful parameters influencing the fate and transport of metals.

Summary Data for pH (pH units), Category B

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	6.5	7.4	7.300	8.1	25	100%
Groundwater	0	7.68	8.66	832	8729	100%

Summary Data for Alkalinity (Total) As CaCO3 (mg/l), Category B

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	65	172	171	263	22	100%
Groundwater	1.9	219	237	5500	5549	100%

Summary Data for Bicarbonate Alkalinity (mg/l), Category B

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	77	191	188	320	29	100%
Groundwater	0	227	258	1600	1802	100%

2.2.2. Hardness

Hardness measurements represent the presence of polyvalent cations (typically calcium and magnesium) in water. The hardness of recycled water is not expected to have any impact on groundwater quality, since the range of hardness in recycled water is within the majority of hardness values for groundwater. All of the recycled water sample results fall within a relatively narrow range of values (180 to 319 milligrams per liter (mg/L) as $CaCO_3$). Hardness in groundwater samples ranges from 0 to 2150 mg/L as $CaCO_3$. Hardness is ranked in category D) Minimal Potential for Impact, because the concentrations in recycled water and groundwater are similar.

Summary Data for Hardness (Total) As CaCO3 (mg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	180	245	243.150	319	20	100%
Groundwater	0	250	267	2150	5986	99.9%

2.2.3. Turbidity

Turbidity is the measure of the light-transmitting properties of water, which primarily represents the presence of suspended and colloidal material. Since pathogens can be attached to these particles, higher turbidity values can be correlated to higher levels of pathogens. Previous studies have shown some impact to groundwater turbidity caused by recharge from a low-quality water source. However, the results appeared to be temporary, and groundwater turbidity returned to normal after recharge from the water source ceased (Pitt et al., 1996).

The USEPA drinking water standard for turbidity is one nephelometric turbidity unit (NTU). Although the representative turbidity values for recycled water are higher than those for groundwater, median turbidity values for both groundwater and recycled water are below the USEPA drinking water standard, as shown in Appendix I-B. However, turbidity is typically higher in surface water than groundwater and the process of infiltration through soil typically changes the turbidity of infiltrating water depending on the depth to groundwater, soil characteristics, and the rate of inflow. In addition, while the turbidity of groundwater is often controlled by the hydrogeology of the aquifer, the measured turbidity of groundwater samples is highly affected by well construction and sampling procedures. Because turbidity in recycled water is similar to groundwater in mean concentrations, it is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Summary Data for Turbidity (NTU), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0.19	0.7	0.804	2.2	18	100%
Groundwater	0	0.15	0.780	120	3775	86.4%

2.2.4. Total Dissolved and Suspended Solids

Total dissolved solids (TDS) and total suspended solids (TSS) are parameters of concern because of the potential adverse impacts on the permeability of the soil (see Section 3). High TDS levels can also retard the growth of vegetation and at extremely high levels, can affect the potability of water. SCVWD's ARWT Feasibility Project technical memo reported that use of recycled water for irrigation will most likely cause TDS levels in groundwater to rise under long term conditions for an unconfined aquifer (SCVWD, 2004). A recycled water irrigation study in Hawaii compared irrigated recycled water to pore water collected at a 5 foot depth, and found that dissolved salts were not removed by the soil filtration process. Dissolved salts were regarded as posing the largest impact from recycled water used for irrigation (Brown and Caldwell, 2005).

TDS is reported in Appendix I-B as Total Filterable Residue. Concentrations of TDS in recycled water range from 630 to 1000 mg/L, consistently higher than concentrations in groundwater. USEPA has set a secondary drinking water standard for TDS of 500 mg/L. TDS is ranked in category A) Significant Potential for Impact, and should be included for monitoring in the study in the study. TSS is also reported in Appendix I-B. The range, detection frequency, and representative values for TSS are all similar for groundwater and recycled water. TSS is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring.

Summary Data for Total Filterable Residue at 180C (Total Dissolved Solids) (mg/l), Category A						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	630	724.5	752.100	1000	20	100%
Groundwater	0	384.5	456.59	12180*	3872	100%

Note: *TDS value from well located next to San Francisco Bay, sampled once in 1972.

Summary Data for Total Suspended Solids (mg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	2.167	10	18	44%
Groundwater	0	0	3.737	10	19	42%

2.2.5. Dissolved and Total Organic Carbon

Total organic carbon (TOC) poses a concern to groundwater because TOC can react with disinfectants to form disinfection by-products. Previous studies have found that that TOC and dissolved organic carbon (DOC) concentrations in recycled water are generally higher than corresponding concentrations in drinking water derived from the same source (American Water Works Association [AWWA], 2001). TOC concentrations in recycled water for groundwater recharge projects are regulated by the California Department of Public Health (DPH) according to Draft DPH Groundwater Recharge Reuse Regulations (SCVWD, 2004).

The ARWT Feasibility Project ranks TOC to have "insignificant" to "slight" potential impact on groundwater in the unconfined portion of the Santa Clara Subbasin, depending on the type of irrigation (agricultural or landscape). TOC is expected to have a minimal potential impact because the mass quantity of TOC added is relatively low and there are known soil attenuation factors. TOC can be attenuated in the environment through adsorption and biodegradation. However, in the unconfined portion of the Llagas Subbasin, the ARWT project ranked TOC to have "slight" to "moderate" potential impact due to the larger quantity of water applied and shallower depth to the unconfined zone (5 -15 feet). Due to parts of the Llagas Subbasin which have shallower groundwater, the ARWT Feasibility Project recommended monitoring of this parameter.

A case study by the Los Angeles County Sanitation District (LACSD) where groundwater recharge was applied to a basin through surface spreading found that most TOC was removed in the top several inches of the recharge basin. Hence, TOC concentration was found to not be a function of depth. Another study looking at DOC at the Sweetwater Recharge Facility in Tucson, Arizona found that DOC was reduced from concentrations of 12 to 25 mg/L at the surface to 2 to 3 mg/L at a depth of 125 feet below ground surface (bgs). The Arizona study also found that the concentrations at 125 ft bgs were largely independent of the initial DOC concentration at the surface (AWWA, 2001).

Concentrations of TOC in groundwater ranged from below detection to 0.69 mg/L in the samples included in the data analysis (Appendix I-B). Recycled water concentrations of TOC ranged from 3.99 to 9.62 mg/L, indicating a significant difference. Measurements of UV-254, which are typically correlated directly to TOC concentrations, show a similar distribution. DOC concentrations in recycled water sources ranged from 5 to 9 mg/L. Because of potential impacts particularly to the shallowest zones in the study area, TOC and DOC are ranked in category A) Significant Potential for Impact, and should be included for monitoring in the study.

Summary Data for Dissolved Organic Carbon (mg/l), Category A						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	5	6.3	6.560	9	5	100%
Groundwater	NA	NA	NA	NA	NA	NA

Summary Data for Total Organic Carbon (mg/l), Category A						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	3.99	6.595	6.630	9.62	18	100%
Groundwater	0	0.31	0.319	0.69	19	79%

2.2.6. Redox Potential and Dissolved Oxygen

The oxygenation state of water either measured as oxidation reduction potential (ORP) or represented by dissolved oxygen is an important physio-chemical parameter of water which affects the chemical state and therefore the fate and transport of many organic and inorganic constituents of recycled water. Because it is a very reactive condition, differences between the oxidation state of recycled water and groundwater do not in and of themselves present a potential impact. However, the oxidation state and the redox potential of the recycled water and soil present an important parameter affecting the fate and transport of constituents which are mobile or immobilized based on oxidation state.

Recycled water can theoretically alter the redox conditions of groundwater if the biological oxygen demand (BOD) of the recycled water is very high and persists during transport to groundwater. During interaction with soil, oxygen in the water is consumed as organic material is degraded (oxidized), and the redox potential becomes more negative. If the water already contains a high BOD, then the recycled water could presumably continue to scavenge oxygen or oxidants from soil and groundwater after it reaches the water table, thereby lowering the oxidation state of groundwater. Because mechanisms for oxygen transport into the saturated zone are minor, oxygen depletion can occur creating an anoxic plume of recharged water that may affect the aquifer.

This effect was observed in a case study of groundwater recharge through surface spreading of recycled water by the LACSD, where oxygen levels in the groundwater were found to be below saturation. However, the oxygen content remained above zero at the site (SCVWD, 2004). Although generally not a concern in the US, anoxic aquifers have occurred elsewhere in the world (Metcalf and Eddy, 2007).

Low redox potential in recycled water remains an indirect concern for groundwater, by reducing iron, manganese, and arsenic compounds in soils to soluble forms. Distribution of recycled water through spray irrigation systems may alleviate this concern by aerating the water prior to infiltration into the soil. Therefore the type of irrigation system may be a significant factor in determining the potential impact of low redox potential in recycled water. A data analysis for redox potential has not been prepared, since the effect of redox potential is a result of complex interactions between recycled water, soil, and in-situ waters and concentrations of oxidants and reactants and is not necessarily a direct result of the redox potential of recycled water. DO and ORP are ranked category B) Important Parameters, and should be included for monitoring in this study.

2.2.7. *Silica*

Silica concentrations in recycled water tend to be lower than those in groundwater (Appendix I-B). This is expected, since groundwater is in constant contact with silica-bearing sediments. Dissolved silica concentrations are typically temperature and pH controlled. Silica is not known to cause any adverse health effects in water, but it can cause scaling problems in industrial systems and groundwater wells. Since the observed concentrations of silica in recycled water sources are lower than those in groundwater, recycled water has very little potential to impact silica in groundwater. Hence, silica is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Summary Data for Silica (mg/l), Category D

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0.9	15.8	18.700	34.6	18	100%
Groundwater	0	25	25.6	244	4416	99.5%

2.3. Cations and Anions

Recycled water may contain several metals and other ions that include aluminum, boron, cadmium, calcium, chloride, copper, cyanide, fluoride, iron, lead, magnesium, manganese, nickel, sodium, sulfate, and zinc. The percentage of each of these constituents remaining after tertiary treatment will depend on the specific treatment train used.

2.3.1. *Transition and Post-Transition Metals*

Recycled water and groundwater samples have been analyzed for a group of metal ions. The group of transition and post-transition metals includes most of the metallic ions commonly dissolved in water, including aluminum, cadmium, copper, iron, lead, manganese, nickel, and zinc. Many of these metals do not warrant a full evaluation because concentrations in recycled water are similar to groundwater, and therefore pose little potential for groundwater impact. In the data analysis, concentrations of aluminum, manganese, and zinc were found to have similar distributions in recycled water and groundwater samples. Therefore, these metals are ranked in category D) Minimal Potential for Impact, and are not recommended for monitoring in the study. A few of the other metals detected in recycled water samples are discussed below.

Summary Data for Aluminum (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	39.6	174	18	33%
Groundwater	0	0	29.8	3800	1955	24%

Summary Data for Manganese (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	13.137	35	19	42%
Groundwater	0	0	28.4	1620	3830	36.8%

Summary Data for Zinc (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	32.263	130	19	42%
Groundwater	0	0	20.7	9400	3268	28.3%

2.3.1.1. Iron

Iron is ubiquitous in soil but is relatively insoluble in water except under reducing conditions. Iron concentrations in recycled water samples were generally lower and less frequently detected than in groundwater samples which probably reflects differences in redox conditions. Although there is no Maximum Contaminant Level (MCL) for iron, a secondary drinking water standard which is recommended but not enforced by USEPA is 300 micrograms per liter (µg/L). The maximum concentration observed in recycled water samples included in the data analysis was 120 µg/L. Iron is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Summary Data for Iron (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	6.700	120	18	6%
Groundwater	0	10	102	26000	4600	52.4%

2.3.1.2. Lead

Lead adsorbs strongly to soils, hence it does not typically migrate to groundwater from surface applications such as irrigation. The drinking water action level for lead is 15 µg/L (USEPA, 2003). In the data analysis, lead was detected in one of the 19 recycled water samples, at a concentration of 11 µg/L.

Detections of lead in groundwater are more frequent, and have shown higher concentrations. Therefore, lead concentrations in groundwater are not likely to be affected by recycled water use. Hence, lead is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Summary Data for Lead (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.579	11	19	5%
Groundwater	0	0	0.892	50	2556	12.4%

2.3.1.3. Nickel

Nickel is one of the most mobile metals. Nickel concentrations in groundwater are controlled by the partitioning between water and soil which is controlled by adsorption/desorption and precipitation/dissolution processes. Adsorption/desorption is dominant in soil with low pH. When pH is high or if nickel concentrations are high, precipitation/dissolution processes control the partitioning of nickel between water and soil. Nickel adsorption is dependent on the soil's cation exchange capacity, pH, texture, carbonate content, organic matter, sesquioxides, and chelating agents. Organic matter, layer silicates, hydrous oxides of silicon, aluminum, iron, and manganese, and carbonates are important adsorbents in soils (Selim and Iskandar, 1999). Groundwater in the Santa Clara and Llagas Subbasins may have elevated concentrations of nickel due to contact with serpentine bedrock. In the data analysis prepared for this study, nickel concentrations were found to have a similar distribution in recycled water samples and groundwater samples. Therefore, nickel concentrations in groundwater are not likely to be affected by recycled water use. Nickel is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study. USEPA does not currently enforce a drinking water standard for nickel.

Summary Data for Nickel (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	3.105	47	19	11%
Groundwater	0	0	1.67	79	1648	14.9%

2.3.1.4. Cadmium

All compounds of cadmium are hazardous to both plants and animals. Accumulation of cadmium in the kidneys can lead to kidney dysfunction and it is a recognized carcinogen. The federal and state MCL is 5 µg/L for cadmium in drinking water (USEPA, 2003; State of California, 2007). Sorption/desorption, ion exchange and precipitation/dissolution are processes that affect the fate of cadmium. Cadmium interacts with soil through ion adsorption at surface sites, ion exchange with clay material, binding by organically coated particulate matter or organic colloidal material, or adsorption of metal ligand complexes. pH and ionic strength of the soil solution influence sorption of cadmium. Increasing the ionic strength in the soil solution tends to lower the sorption of cadmium. Sorption of cadmium increases as pH increases especially in the pH range from 5.5 to 6.5 where an adsorption edge occurs. Cadmium sorption will decrease in the presence of metals and cations competing for sorption sites (Selim and Iskandar, 1999).

Cadmium was detected in one of the recycled water samples included in the data analysis, from SJ/SC WPCP with a concentration of 12 µg/L. Higher concentrations have been observed in groundwater, although the relative detection frequency for groundwater is lower. Because cadmium is not detected in recycled water frequently, it is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Summary Data for Cadmium (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.632	12	19	5%
Groundwater	0	0	0.0841	21	2518	3.8%

2.3.1.5. Copper

Copper is a metal that is both essential to life and toxic at high or sustained concentrations. Copper retention in soil is intricate. Copper (II) can complex with a number of anions that are commonly found in natural water. At low copper concentrations such as those typically found in environmental samples (<32,000 µg/L), the presence of tartaric acid and fluvic acid decreases retention in soils. Tartaric acid is commonly introduced in the environment through plant roots and decomposing plant material. Observed increases in copper mobility have been related to binding with DOC (Selim and Iskandar, 1999).

USEPA has set a drinking water action level for copper of 1,300 µg/L, based on reducing the corrosiveness of drinking water (USEPA, 2003). Copper was detected in only one of the recycled water samples with a concentration of 61 µg/L. Concentrations of copper in groundwater are generally higher, and are detected more frequently. Therefore, it is unlikely that copper concentrations in groundwater will be significantly affected by use of recycled water. Hence, copper is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Summary Data for Copper (µg/l), Category D

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	3.211	61	19	5%
Groundwater	0	0	6.15	2000	3058	17.5%

2.3.2. Other Ions

Recycled water commonly contains several other metallic and non-metallic ions of natural and anthropogenic origin.

2.3.2.1. Boron

Boron compounds are used in a wide range of industrial applications that eventually find their way into the water supply. In the environment, boric acid and borate ions are the most frequent form of boron. Boron has been shown to adsorb to soils, depending on the pH of the water. The World Health Organization has established a provisional guideline for boron in drinking water of 500 µg/L (World Health Organization, 1998b). The majority of boron concentrations in recycled water and groundwater samples included in the data analysis were lower than this value, although one sample collected from SJ/SC WPCP showed a concentration of 505 µg/L. Boron concentrations in the recycled water sources analyzed in this study fell within a fairly narrow range. Boron concentrations in groundwater have been observed as high as 5,200 µg/L within the study area. However, the median boron concentration in recycled water samples (416 µg/L) was higher than the median for groundwater samples (134 µg/L). Boron is toxic to some plants at lower concentrations than humans and therefore the use of recycled water for irrigation may be limited by the effects on plants rather than potential impacts to groundwater. Because the degree of boron adsorption to soils is dependent on pH, which may vary, boron is ranked in category C) Inconclusive, and should be included for monitoring in the study.

Summary Data for Boron (µg/l), Category C						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	207	416	398	505	19	100%
Groundwater	0	134	196	5200	1815	85%

2.3.2.2. *Cyanide*

Generally, cyanide is not a persistent or stable constituent in water or soil. It volatilizes quickly and can biodegrade. Cyanide also does not accumulate in aquatic organisms. However, because cyanide does not bind to soils, it may leach to groundwater if it doesn't evaporate (USEPA, 2006b). The USEPA MCL in drinking water for cyanide is 200 µg/L (USEPA, 2003). The California MCL is 150 µg/L (State of California, 2007). Standards for cyanide in surface water bodies are more stringent than drinking water standards. Currently, the the RWQCB specifies a screening level of 1 µg/L for aquatic habitat goal based on California Toxics Rule (California Regional Water Quality Control Board, 2007). Cyanide has been detected in two of the recycled water sources included in the data analysis, SCRWA and SJ/SC WPCP. Both detections were below the California MCL (CA MCL) for drinking water, but above the cyanide aquatic habitat goal. Cyanide is detected infrequently in groundwater but the maximum is higher than the observed maximum in recycled water. Cyanide is ranked in category C) Inconclusive, and should be included for monitoring in the study.

Summary Data for Cyanide (µg/l), Category C						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	4.5	58	14	14%
Groundwater	0	0	0.459	350	1059	0.6%

2.3.2.3. *Fluoride*

Fluoride is added to many drinking water sources as an additive for oral health. Due to fluoridation in the water supply from the San Francisco Public Utility Commission, some communities in Santa Clara County receive fluoridated drinking water. Drinking water for the Gilroy area is not currently fluoridated, but there is a low concentration of natural fluoride in the groundwater source for Gilroy's drinking water. As a result, the recycled water from SCRWA (located in Gilroy) has consistently lower fluoride concentrations (ranging 0.15 to 0.41 mg/L) than the other recycled water sources (ranging 0.55 to 1.69 mg/L). In general, fluoride concentrations in recycled water are higher than those in groundwater. The USEPA MCL drinking water standard for fluoride is 4.0 mg/L. Both the median concentrations for recycled water and groundwater are below the standard. Fluoride adsorbs strongly to soils, and at a low pH, can actually react directly with soil components. However, because fluoride is not harmful to human health or the environment at these concentrations, these effects may not be significant. Because fluoride concentrations in recycled and groundwater are below the drinking water standard, fluoride is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Summary Data for Fluoride (mg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0.15	0.68	0.648	1.69	18	100%
Groundwater	0	0.13	0.518	721	5051	87.3%

2.3.2.4. Calcium, Magnesium, Sodium, Chloride, and Sulfate

Although not generally a health concern, concentrations of calcium, magnesium, sodium, chloride, and sulfate in recycled water have been shown to impact groundwater. USEPA does not currently enforce drinking water standards for these ions, but recommends secondary drinking water standards for chloride and sulfate, both at 250 mg/L. One study in Florida using recycled water for irrigation of several golf courses found that concentrations of calcium were lower in groundwater at golf courses irrigated with recycled water compared to those irrigated with local well water. Sodium concentrations were found to be higher in the groundwater at golf courses irrigated with recycled water than at golf courses irrigated with local well water (USGS, 1996).

High sodium concentrations relative to calcium and magnesium also have the potential to cause clay swelling and affect soil permeability (see Section 3: Soil Aquifer Plugging) but these effects can be partially reversed by salinity. Sodium affects soil when the proportion of sodium relative to calcium plus magnesium is high. When the soil water is highly saline and all constituents including sodium are present in high concentrations, the dispersing effects of sodium are mitigated by high concentrations of magnesium and calcium. When sodium is high and salinity including calcium and magnesium is low, the disruption of the soil can be extensive. Where use of recycled water produces significant increases in sodium, calcium, magnesium, sulfate, or chloride, groundwater salinity and TDS concentrations can also increase producing an adverse effect on water quality.

In the samples reviewed for the data analysis, calcium concentrations in groundwater and recycled water show a similar distribution. The median magnesium concentration was higher in recycled water samples, but the range of concentrations in recycled water was within the range for groundwater. Sodium, chloride, and sulfate concentrations are also higher in the recycled water sources relative to basin groundwater and therefore may affect soil as well as concentrations of these constituents in groundwater. Calcium, magnesium, sodium, chloride, and sulfate are ranked in category A) Significant Potential for Impact, and should be included for monitoring in the study. Special attention needs to be taken with calcium, magnesium, and sodium because of their potential to cause reduced soil permeability.

Summary Data for Calcium (mg/l), Category A

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	40.7	51	51.400	69.2	21	100%
Groundwater	0	56	61.5	916	5813	100.0%

Summary Data for Magnesium (mg/l), Category A

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	26.7	31.7	32.900	42.2	19	100%
Groundwater	0	25	30.7	370	5785	99.9%

Summary Data for Sodium (mg/l), Category A

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	118	148.95	161.600	230	20	100%
Groundwater	0	29	39.7	3570	5798	100.0%

Summary Data for Chloride (mg/l), Category A

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	119	196	207.700	320	20	100%
Groundwater	0	34	61.9	20000	6837	99.7%

Summary Data for Sulfate (mg/l), Category A

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	60.1	96.6	99.800	247	19	100%
Groundwater	0	42.3	54.1	1500	5915	99.8%

2.4. Nutrients

Wastewaters can often contain significant concentrations of organic and inorganic nutrients. Concentrations of these nutrients are also found in recycled water. Some studies have suggested that the presence of these nutrients can provide benefits as a supplemental fertilizer source when used for agricultural irrigation (Toze, 2004). Two of the most common nutrients present in recycled water are phosphate and nitrate.

2.4.1. Phosphate

Generally, phosphorus is a limiting nutrient for plant growth. One of the most common attenuation pathways for phosphate is crop uptake. Past the root uptake zone, phosphate can be attenuated by precipitation. When soluble phosphate is added to acidic soils, the majority of the phosphate turns into iron and aluminum phosphates which are insoluble. In calcareous soils, soluble phosphate forms calcium phosphate (Chang and Chu, 1961). Anaerobic soils have a higher capacity to sorb and release phosphate than aerobic soils. In anaerobic conditions, reduced ferrous compounds have a higher surface area allowing for phosphate to be more readily sorbed or released (Patrick and Khalid, 1974). Sinaj et al. (2002) found that phosphate is highly mobile in the top soil. In the subsoil, phosphate mobility is restricted due to the higher phosphorus-fixing capacity.

Phosphate was detected in every recycled water sample reviewed for this study. The median concentration found in recycled water was 9.2 mg/L. It was also detected in 37% of the groundwater samples, although the maximum groundwater concentration is lower than the minimum recycled water concentration observed. However, because of this difference and because phosphate's transport characteristics are not well known, phosphate is ranked in category C) Inconclusive, and should be included for monitoring in the study.

Summary Data for Phosphate (mg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0.45	9.205	7.943	14	18	100%
Groundwater	0	0	0.0395	0.21	19	37%

2.4.2. Nitrate and Nitrite

Nitrate is a common constituent in recycled water. Fertilizers and degradation of biomass also provide sources to surface and eventually groundwater. Nitrate is a concern for groundwater because parts of the Santa Clara Valley have groundwater concentrations above the USEPA MCL, which is 10 mg/L as N (44.3 mg/L as NO_3). The CA MCL for nitrate in drinking water is 45 mg/L as NO_3. Nitrate is known to cause short term health effects such as "blue baby syndrome" among infants (USEPA, 2007a).. Concentrations above the federal MCL have been observed in samples from groundwater wells within the Llagas Subbasin. The California DPH has set the draft maximum allowable nitrogen concentration for recycled water in groundwater recharge projects as 5 mg/L as N (22.1 mg/L as NO_3) (SCVWD, 2004).

Nitrate can leach through the soil into the groundwater over time, but there are several attenuation factors that reduce the potential impact, such as denitrification, crop uptake, and volatilization into nitrogen gas. Hence, the amount of nitrate that reaches groundwater is typically less than the amount applied (SCVWD, 2004). The effect of denitrification can vary from 0 to 90 percent of the total nitrogen concentration. Crop uptake can cause up to 50 percent attenuation. Due to these processes, the travel time for nitrate from the vadose zone to groundwater can be as much as 10 to 100 years (SCVWD, 2004).

In the environment, nitrate is converted into nitrite through microbial degradation. By a similar microbial process, nitrate can be produced from ammonia. Due to this generation mechanism, the ARWT Feasibility Project recommended the review of ammonia levels in recycled water sources. In a case study where groundwater was recharged to a basin through surface spreading using treated effluent, LACSD found that nitrate had increased with depth and ammonia decreased with depth. The case study also concluded that denitrification was not dominant at this site (SCVWD, 2004).

The ARWT Feasibility Project concluded that for agricultural purposes in the unconfined zone of the Santa Clara Subbasin, nitrate would not cause a significant impact to the groundwater because mass loading is expected to be low. For the Llagas Subbasin, the ARWT Feasibility Project determined that current groundwater concentrations of nitrate are higher than recycled water concentrations, and that recharging with recycled water may lead to improvement of the groundwater quality (SCVWD, 2004).

The data analysis shows that nitrate concentrations in recycled water frequently exceed the draft California DPH maximum allowable limit for the purpose of groundwater recharge (22.1 mg/L as NO_3). The median nitrate concentration in recycled water is 41 mg/L as NO_3. Nitrite concentrations in recycled water samples show a similar distribution and detection frequency to groundwater samples. Potential for nitrate in recycled water to affect nitrogen levels in groundwater exists. Nitrate and nitrite are ranked in category C) Inconclusive, because it is not clear how effective the attenuation factors will be in reducing these constituents. These parameters should be included for monitoring in the study.

Summary Data for Nitrate as NO_3 (mg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	2.1	41.3	44.500	122	20	100%
Groundwater	0	20	23.5	429	14772	97.3%

Summary Data for Nitrite (As N) (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	20.000	400	18	6%
Groundwater	0	0	124	48000	1571	6.2%

2.5. Anthropogenic Compounds

Anthropogenic compounds are man-made chemicals which are not naturally occurring. Several anthropogenic compounds are also endocrine disrupting compounds (EDCs), which are substances that mimic, block, stimulate, or inhibit natural hormones in the endocrine system (Metcalf and Eddy, 2007). EDCs can include steroid hormones as well as synthetic organic compounds, including certain plasticizers and surfactants. Additional research is needed in fate and transport data, standardized analytical methodology, removal kinetics, predictive models, synergistic effects, and determination of the toxicological relevance of EDCs.

2.5.1. Disinfection By-Products (DBPs)

Disinfection by-products (DBPs) are primarily dissolved organohalogens from oxidative breakdown of organic substances during treatment with a chemical disinfectant. DBPs include trihalomethanes, haloacetonitriles, haloketones, haloacetic acids, chlorophenols, aldehydes, trichloronitromethane, chloral hydrate, and cyanogen chloride. DBPs, formed by chlorination, depend on pH, temperature, reaction time, free and combined chlorine concentrations, ammonia concentration, DBP precursor concentration, and precursor type. DBPs are not expected to accumulate in the soil. Considering the transient time of water and degradation of DBPs in the vadose zone, most, but not all, DBPs are unlikely to cause a significant threat to groundwater (Metcalf and Eddy, 2007).

2.5.1.1. Trihalomethanes (THMs)

Trihalomethanes (THMs) are a group of chemicals that include chloroform, bromodichloromethane, dibromochloromethane, and bromoform. THMs are formed during chlorine disinfection. During chlorination, hypochlorous acid (i.e. the active disinfectant) reacts with natural organic matter (NOM) to form THMs. In the presence of bromide, hypochlorous acid can be converted to hypobromous acid, which also reacts with NOM to produce brominated THMs. THM concentrations generally increase when the chlorine dose, concentration of NOM, chlorine contact time, pH, temperature, and/or concentration of bromide ion increase (Sadiq and Rodriquez, 2004). US EPA's maximum contaminant level for total THMs is 80 μg/L (USEPA, 2003).

THMs volatilize quickly so their potential impact on groundwater through irrigation is low, particularly if there is a significant vadose zone thickness. However, there is little degradation of THMs once they have reached the saturated zone (AWWA, 2001). Pavelic et al. (2005) found that for an aquifer storage and recovery system, THMs had half lives ranging from < 1 to 65 days. The rate of removal for chloroform was the lowest and the rate of removal for bromoform was the highest.

In the recycled water samples included in the data analysis, THMs were detected in every sample analyzed at levels above the USEPA MCL for total THMs. Bromoform is the only compound that was not detected in 100 percent of the recycled water samples. Each of the THMs was also detected in groundwater samples, with frequencies ranging from 0.3% to 1.3%. The median and maximum concentrations were higher for each THM in recycled water samples. THMs are ranked in category C) Inconclusive, and should be included for monitoring in the study. Although it is clear there is reduction in THMs through the vadose zone, it is unclear if groundwater will be impacted.

Summary Data for Trihalomethanes, Total (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	150	159.5	159.500	169	2	100%
Groundwater	0	0	0.0956	69	5491	1.7%

Summary Data for Bromoform (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	3	14.2684	61	19	79%
Groundwater	0	0	0.0192	20.6	7138	0.5%

Summary Data for Bromodichloromethane (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	6.1	45.5	46.39	95	20	100%
Groundwater	0	0	0.00959	12	10592	0.3%

Summary Data for Chloroform (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	2.7	54	50.216	95	19	100%
Groundwater	0	0	0.0491	54	7191	1.3%

Summary Data for Dibromochloromethane (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	2.4	32	42.458	115	19	100%
Groundwater	0	0	0.0142	14.4	7068	0.6%

2.5.1.2. Haloacetic Acids (HAA5)

Haloacetic acids are common disinfection by-products formed through a reaction of natural organic matter in the wastewater with hypochlorous or hypobromous acid. HAA5 is a specific group of five haloacetic acids: monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid. US EPA's maximum contaminant level for total HAA5 is 60 µg/L (USEPA, 2003). A sixth haloacetic acid, bromochloroacetic acid, is also frequently found in treated effluent, but is not included in the regulated HAA5 group. When bromochloroacetic acid is included with the other HAA5 compounds, they are referred to as the HAA6 group.

HAA5 compounds may degrade, but not completely, and the attenuation rates for HAA5 are low, especially in the saturated zone (SCVWD, 2004). Conversely, Pavelic et al. (2005) found that in an anoxic aquifer storage and recovery system, HAA5 were found to attenuate rapidly (half life < 1 day).

From the data analysis prepared for this study, all haloacetic acids appear in recycled water with greater frequency and higher concentrations than in groundwater. The median concentration for HAA5 in recycled water samples is slightly higher than the USEPA MCL (60 µg/L). Two haloacetic acids, dibromoacetic acid and bromochloroacetic acid, were detected in groundwater samples. Bromochloroacetic acid was detected in one third of the groundwater samples tested, although at much lower concentrations than those found in the recycled water samples. The maximum concentration of HAA5 observed in groundwater was 2.8 µg/L.

Because information on fate and transport of HAA5 is limited, HAA5 is ranked in category E) Insufficient Information, and should be included for monitoring in the study. Bromochloracetic acid should also be included in the analysis, since it has been observed in recycled water.

Summary Data for HAA5 (µg/l), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	1.7	62.45	83.361	232.3	18	100%
Groundwater	0	0	0.489	2.8	9	22%

Summary Data for Monochloroacetic Acid (µg/l), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	2.3	5.188	21.4	16	63%
Groundwater	0	0	0	0	9	0%

Summary Data for Dichloroacetic Acid (µg/l), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	15.65	29.100	80.4	18	94%
Groundwater	0	0	0	0	42	0.0%

Summary Data for Trichloroacetic Acid (µg/l), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	25.35	39.180	124	18	89%
Groundwater	0	0	0	0	42	0.0%

Summary Data for Monobromoacetic Acid (µg/l), Category E						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	1.6	1.979	6.9	19	58%
Groundwater	0	0	0	0	9	0%

Summary Data for Dibromoacetic Acid (µg/l), Category E						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	4.75	8.378	30.3	18	78%
Groundwater	0	0	0.0488	1	41	4.9%

2.5.1.3. N-Nitrosodimethylamine (NDMA)

N-nitrosodimethylamine (NDMA) is a polar, uncharged organic compound, and is known to be a potent carcinogen. In response to the health concern of NDMA, The California Department of Public Health has set a drinking water notification level of 0.01 µg/L (CDPH, 2007). NDMA was formerly used in the production of liquid rocket fuel, antioxidants, and softeners for copolymers; but NDMA is currently used only for research purposes (USEPA, 2008). In addition, NDMA may form during water treatment using chlorination. Research suggests that NDMA can be formed by the reaction from (1) monochloramine, which is a common form of chlorine when ammonia-containing water is disinfected, and (2) simple amines like dimethylamine. As a result of industrial processes (e.g. printed circuit board manufacturing and waste treatment), NDMA is also present in wastewater effluent prior to disinfection (Sedlak et al., 2005). Precursors of NDMA mainly consist of complex organic compounds that contain nitrogen (Pehlivanoglu-Mantas et al., 2006). The precursors are found to be difficult to remove by conventional and advanced treatment processes. Ultraviolet (UV) radiation has been shown to be an effective method of removing NDMA, however the process is expensive (Metcalf and Eddy, 2007; Deeb et al., 2006).

A Southern California field study evaluated the leaching potential of NDMA in turfgrass soils irrigated with recycled water. The study attributed the lack of NDMA in leachate water to several potential mechanisms including degradation, plant uptake, gas phase diffusion in soil, and volatilization at the soil surface (Gan et al., 2006). The conditions in this field study were typical of irrigated turf grass. This study suggests that irrigation of landscapes with water containing NDMA will have minimal potential to cause groundwater contamination. Data suggests that NDMA does not sorb or biodegrade well once it is in the saturated zone. Where NDMA has been detected in groundwater, it has been found to be persistent. NDMA precursors are resistant to biotransformation, but can be partially removed in saturated soil columns (Gan et al., 2006; WateReuse Foundation, 2006). In a recycled water irrigation study performed in Hawaii, concentrations of NDMA were observed to decrease between the irrigated recycled water and the infiltrated water at a 5 foot depth (Brown and Caldwell, 2005). The study concluded that approximately 94 percent of the NDMA in applied recycled water was removed in the vadose zone, and that the soil in Central Oahu had sufficient rention time and soil carbon to remove complex organics such as NDMA from infiltrated water prior to reaching groundwater. In other studies, (Bradley et al., 2005; Kaplan and Kaplan, 1985), NDMA was found to biodegrade in laboratory settings in unsaturated and saturated soil samples under both aerobic and anaerobic conditions. More recently, field evidence of in situ NDMA biodegradation in the subsurface was supported in a separate study (Zhou et. al., 2009).

As an emerging contaminant, there are few groundwater samples analyzed for NDMA within the SCVWD database for the study area. In the database, NDMA was not detected in any of the groundwater samples. From April through June 2007 the Ground-Water Ambient Monitoring and Assessment (GAMA) program investigated groundwater quality in the San Francisco Bay region, and did not find any detections of NDMA in groundwater within the Santa Clara County (Ray et al, 2009). In the recycled water samples analyzed for NDMA, it was detected in all except one sample, with detections up to 0.49 µg/L. NDMA is ranked in category C) Inconclusive, and should be included for monitoring in the study. Under conditions where there is minimal potential for volatilization, NDMA has potential to affect the groundwater.

Summary Data for N-Nitroso dimethylamine (NDMA) (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0.026	0.091	0.49	15	93%
Groundwater	0	0	0	0	17	0%

2.5.1.4. Bromate

Bromate (BrO_3^-) in recycled water forms from disinfection using ozonation. The precursors to bromate formation are bromide and ammonia ion. The World Health Organization has labeled bromate as a possible human carcinogen (Butler et al., 2005b). Recently, bromate contamination has been discovered in groundwater aquifers in Japan and the United Kingdom (Butler et al., 2005b, Mihoko et al 2006). Bromate has also been found exceeding protective standards in groundwater near an ore processing facility in the United States (USEPA, 2006a). Many countries have set a drinking water standard for bromate ranging from 10 to 25 µg/L. The maximum contaminant level (MCL) for bromate in the U.S. is 10 µg/L (USEPA, 2003). Bromate is highly soluble and stable in water. Conventional treatment has proven difficult in removing bromate (Butler et al., 2005a).

In the recycled water samples included in the data analysis for this study, bromate was detected in 11% of the samples at concentrations up to 3 µg/L. Bromate was not detected in any of the groundwater samples reviewed for this study. Because concentrations of bromate in recycled water are less than drinking water standards, it is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Summary Data for Bromate (µg/l), Category D

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.333	3	18	11%
Groundwater	0	0	0	0	19	0%

2.5.2. Pesticides and Associated Chemicals

Pesticides can enter groundwater from direct application to crops or from a wastewater stream that may contain traces of pesticides. Some pesticides can be difficult to remove completely in wastewater treatment, particularly since laboratory analytical methods for pesticides are very sensitive. Although there are many pesticides with the potential to impact groundwater quality, this section discusses four that have been detected in recycled water sources within the study area. A few additional pesticides, such as atrazine and glyphosate, were analyzed in recycled water samples, but were not detected. Other pesticides, such as the pyrethroids allethrin and bifenthrin, were not analyzed in recycled water samples for this data analysis.

2.5.2.1. Lindane (Gamma-BHC)

Lindane (Gamma-BHC) is applied as a pesticide for insects including wood-inhabiting beetles and lice on pets and livestock. It is also used on fruit and nut trees, vegetables, and timber. In the environment, lindane can be degraded by soil microbes. Lindane can also evaporate from the surface or can leach slowly into groundwater (USEPA, 2006b). A study of recycled water irrigation on golf courses in Florida found lindane and other pesticides at trace levels in the recycled water. Pesticides were detected in 52 percent of the shallow groundwater samples collected during that study. However, the golf courses also used pesticides to maintain turf. Hence, the contribution of pesticides from the recycled water cannot be determined (USGS, 1996). The federal and California MCL for lindane is 0.2 µg/L (USEPA, 2003, State of California, 2007). Lindane was detected in one of the recycled water samples included in the data analysis, with a concentration of 0.01 µg/L. Lindane was not detected in any groundwater samples. Because lindane was detected in only one sample, at a concentration below the MCL, it is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Summary Data for Lindane (Gamma-BHC) (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.001	0.01	16	6%
Groundwater	0	0	0	0	222	0.0%

2.5.2.2. Heptachlor Epoxide

Heptachlor epoxide is not manufactured directly, but is formed through the chemical and biological degradation of heptachlor in the environment. Heptachlor, once used as a non-agricultural insecticide, is currently only permitted to be used for fire ant control in buried electric power transformers and in underground cable boxes for televisions and telephones. In soil, heptachlor degrades readily to heptachlor epoxide, which can persist in upper soil layers for many years because it adsorbs strongly to soil and is resistant to biodegradation. Heptachlor epoxide can also be introduced into the food chain through plant uptake, and will bioaccumulate in animals. The current federal drinking water standard for heptachlor epoxide is 0.2 µg/L (USEPA, 2006b). The CA MCL for heptachlor epoxide is 0.01 µg/L. Heptachlor epoxide was detected in one of the recycled water samples analyzed, at a concentration of 0.01 µg/L.

Although the data analysis included over 1000 groundwater samples analyzed for this chemical, it was not detected in any samples. Because heptachlor epoxide is detected infrequently and adsorbs strongly to soil, it is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Summary Data for Heptachlor Epoxide (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.001	0.01	15	7%
Groundwater	0	0	0	0	1079	0.0%

2.5.2.3. *Aldicarb Sulfoxide*

Aldicarb sulfoxide is a microbial degradation product of aldicarb, a common pesticide used for aphids, mites, and some species of flies. The most common use of aldicarb is for cotton farming, although it is approved for use with other crops as well. Aldicarb sulfoxide is a potent neurotoxin at sufficient concentrations. The transformation of aldicarb to aldicarb sulfoxide occurs relatively quickly in the environment. The degradation of aldicarb sulfoxide occurs more slowly, by nonbiological processes (USGS, 1995). Aldicarb sulfoxide was detected in four of the 18 recycled water samples analyzed. It was also detected in some groundwater samples, but at a much lower frequency (0.4%). Because of the limited information of fate and transport of aldicarb sulfoxide, it is ranked in category E) Insufficient Information, and should be included for monitoring in the study.

Summary Data for Aldicarb Sulfoxide (µg/l), Category E						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.2778	1.5	18	22%
Groundwater	0	0	0.0122	3	738	0.4%

2.5.2.4. *Terbuthylazine*

Terbuthylazine is an herbicide that inhibits photosynthesis in plants. It is used to control algae, fungi, and bacteria in commercial and industrial water cooling systems. Discharge of water containing terbuthylazine to sewage systems is prohibited without first notifying the treatment plant authority. Terbuthylazine has been shown to degrade in soil, at varying rates depending on the temperature, moisture level, microbial activity, pH, and aeration state. Adsorption of terbuthylazine onto soil is dependent on the organic material content. Terbuthylazine is also degraded through exposure to sunlight, with a half-life of approximately three months (World Health Organization, 1998). Terbuthylazine was detected in two of the four recycled water samples analyzed, as shown in Appendix I-C. Data for terbuthylazine in groundwater were not available for the data analysis. For this reason, terbuthylazine is ranked in category C) Inconclusive, and should be included for monitoring in the study.

Summary Data for Terbuthylazine (µg/l), Category C						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0.05	0.050	0.1	4	50%
Groundwater	NA	NA	NA	NA	NA	NA

2.5.3. Hormones and Pharmaceutically Active Compounds (PhACs)

Hormones are EDCs, and can either be natural or synthetic. Concentrations of natural and synthetic hormones are generally low in recycled water. It is suspected that most of these hormone compounds absorb to soil and biodegrade quickly. One study found that estrone, an estrogenic hormone, degrades rapidly in aerobic soils. Anaerobic conditions resulted in little or no degradation of estrone (Ying, 2006). In a soil column study using three feet (one meter) soil columns operated under different conditions, gemfibrozil, ibuprofen, and noaproxen were believed to biotransform after 6 days of travel time as indicated by the lack of detection below the quantification limit under anoxic and oxic conditions. Biotransformation was identified as the main attenuation mechanism for these constituents under biotic conditions (Hoppe-Jones, et al, date unspecified). In the data analysis, estrone was detected in one groundwater sample and one recycled water sample, at concentrations of 0.0016 and 0.011 µg/L, respectively. Since it is detected infrequently, and has fate and transport characteristics that would limit the transport to groundwater, estrone can be classified in category D) Minimal Potential for Impact.

Pharmaceutically active compounds (PhACs) include antibiotics, anti-inflamatories, x-ray contrast media, and antidepressants. Some PhACs, like contraceptives and steroids, are also EDCs. The majority of PhACs are more hydrophilic than other anthropogenic compounds, which makes them less subject to adsorption, but possibly more biodegradable (Metcalf and Eddy, 2007). However, most steroids have a higher octanol-water partition coefficient and will sorb readily. In one study with steroidal hormones (17 beta-estradiol, estriol, and testosterone), adsorption to the porous media was the dominant removal mechanism. Further attenuation occurred in the presence of bioactivity regardless of the redox conditions whether the soil was aerobic or anoxic. Attenuation with bioactivity was not dependent on the type of organic carbon matrix (hydrophobic acids, hydrophilic carbon, or colloidal carbon) (Mansell et al., 2004).

Six compounds that can be classified as PhACs were detected in the recycled water samples included in the data analysis: caffeine, carbamazepine, carisoprodol, gemfibrozil, ibuprofen, and naproxen. Of these compounds, ibuprofen was detected most frequently, in 27% of recycled water samples analyzed. Caffeine, carisoprodol, and naproxen were each detected in only one sample. None of these compounds were detected in the groundwater samples. Due to the limited information on fate and transport characteristics, PhACs are ranked in category E) Insufficient Information, and should be included for monitoring in the study.

Summary Data for Ibuprofen (µg/l), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.061	0.7	15	27%
Groundwater	0	0	0	0	15	0%

Summary Data for Caffeine (µg/l), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.040	1	25	4%
Groundwater	0	0	0	0	18	0%

Summary Data for Gemfibrozil (µg/l), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.017	0.22	15	13%
Groundwater	0	0	0	0	15	0%

Summary Data for Carbamazepine (µg/l), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.017	0.2	15	13%
Groundwater	0	0	0	0	15	0%

Summary Data for Naproxen (µg/l), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.003	0.04	15	7%
Groundwater	0	0	0	0	15	0%

Summary Data for Carisoprodol (µg/l), Category E						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.000	0.001	11	9%
Groundwater	0	0	0	0	10	0%

Summary Data for Estrone (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.001	0.011	18	6%
Groundwater	0	0	0.1067	1.6	15	7%

2.5.4. Industrial Chemicals

Removal of industrial chemicals (detergent compounds, their metabolites, and halogenated compounds) usually relies on photodegradation, affinity toward absorption to soil material, and biodegradability. Some of these chemicals degrade quickly while others may persist longer. Current research suggests that the soil environment can reduce most industrial chemicals to low levels. The ARWT Feasibility Project reported concentrations of detergent metabolites to decrease significantly as they migrate through the vadose zone, but reduction was not complete (SCVWD, 2004). Some industrial chemicals are also endocrine disruptors (Metcalf and Eddy, 2007).

2.5.4.1. Volatile Organic Compounds (VOCs)

Volatile organic compounds (VOCs) include a list of dozens of chemicals, which are frequently groundwater contaminants at industrial sites. Although recycled water samples have been analyzed for a comprehensive list of VOCs, only two of these chemicals were detected in the recycled water sources: carbon tetrachloride and xylenes.

Carbon tetrachloride is a clear heavy organic liquid used in fire extinguishers, nylon manufacturing, rubber cement, insecticides, and cleaning agents. Carbon tetrachloride evaporates quickly from surface water and soil. It does not adsorb well to soil, and hence may leach into groundwater. Carbon tetrachloride does not tend to accumulate in aquatic organisms (USEPA, 2006b). The federal MCL drinking water standard for carbon tetrachloride is 5 µg/L (USEPA, 2003). The CA MCL for carbon tetrachloride is 0.5 µg/L (State of California, 2007). In the data analysis for this study, carbon tetrachloride was detected in one of the nineteen recycled water samples tested, at a concentration of 0.69 µg/L, which is above the CA MCL. Carbon tetrachloride is detected infrequently in both recycled water and groundwater with 0.7% detection in groundwater and 6% in recycled water. The mean concentration of carbon tetrachloride in groundwater is 0.04 µg/L compared to 0.041 µg/L in recycled water. Because carbon tetrachloride was found in recycled water at similar concentrations to those of groundwater, carbon tetrachloride is ranked in category D) Minimal Potential for Impact, and is not recommended for monitoring in the study.

Xylenes are a group of similar compounds, used predominantly as a solvent. There are three isomers (meta-xylene, para-xylene, and ortho-xylene), which can be quantified individually but are more frequently reported cumulatively as total xylenes. In the environment, xylenes will evaporate when released into the soil or water. However, they can leach into the groundwater and persist there for several years. Xylenes tend not to accumulate in aquatic organisms (USEPA, 2006b). The federal and CA MCL drinking water standard for xylenes is 10,000 µg/L and 1,750 µg/L respectively (USEPA, 2003; State of California, 2007). Xylenes were detected in one of the recycled water samples included in the data analysis, at a concentration of 3.8 µg/L. Concentrations of xylenes have also been detected in groundwater, but those concentrations are most likely due to localized impacts with high concentrations. Xylenes were detected in only 1.1% of groundwater samples. Because xylenes were found in recycled water in low amounts and low frequency, xylenes are ranked in category D) Minimal Potential for Impact, and are not recommended for monitoring in the study.

Summary Data for Carbon Tetrachloride (µg/l), Category D

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.041	0.69	17	6%
Groundwater	0	0	0.0400	13.6	7069	0.7%

Summary Data for Xylenes, Total (µg/l), Category D

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.224	3.8	17	6%
Groundwater	0	0	0.698	580	6730	1.1%

2.5.4.2. 1,4-Dioxane

1,4-Dioxane is a solvent stabilizer compound commonly associated with VOCs, particularly 1,1,1-trichloroethane, and is a probable human carcinogen. It is a water contaminant that is used in a variety of industrial and commercial products. 1,4-Dioxane is highly soluble and resistant to biodegradation. 1,4 Dioxane can be successfully removed by advanced oxidation processes (Metcalf and Eddy, 2007). Although several samples of recycled water from the study area have been analyzed for 1,4-dioxane, it has not been detected in any samples. Hence, it is included in category D) Minimal Potential for Impact.

2.5.4.3. Plasticizers

Plasticizers are chemicals used to increase the plasticity of certain materials such as plastics and cement. Common plasticizers include di(2-ethylhexyl)phthalate (DEHP), N-butyl benzenesulfonamide (NBBS) and bisphenol-A (BPA). DEHP is widely used in the manufacture of polyvinyl chloride plastics. In the environment, DEHP does not evaporate, but it strongly adsorbs to soil, and has very low solubility in water. For these reasons, there is minimal potential for DEHP to leach into groundwater. In the presence of water, DEHPs can be biodegraded within weeks. However, in the food chain it can accumulate to elevated concentrations in aquatic organisms (USEPA, 2006b). DEHP was detected in two of the recycled water samples used for the data analysis. Concentrations have been observed in groundwater at much higher concentrations, although with much lower frequency. DEHP is ranked in category D) Minimal Potential for Impact. Monitoring for this constituent is not needed.

NBBS is a water-soluble compound used in nylon production. It enters the environment when water comes into contact with NBBS-containing plastics, such as leaching of landfills where NBBS-containing plastics have been disposed. In a previous SCVWD study, NBBS was detected in surface water, recycled water and groundwater. The study found levels of NBBS in samples of recycled water that are generally similar to those in surface water (SCVWD, 2006). Little information is available regarding the transport of NBBS through soil, although given its solubility and common presence in surface water and groundwater, it appears to have minimal, if any, attenuation through the vadose zone. NBBS was detected in two thirds of the samples included in the data analysis, and in one of the ten groundwater samples. Although detections were more frequent in recycled water samples, the highest observed concentration of NBBS was in the groundwater sample, at 0.5 μg/L. Because of the limited information in fate and transport, NBBS is ranked in category E) Insufficient Information, and should be included for monitoring in the study provided a laboratory capable of testing this constituent is identified.

BPA is used in polycarbonate plastic and epoxy resins. BPA is also classified as an estrogen-like EDC. In a laboratory batch equilibrium study of sorption on soils, BPA showed weak sorption characteristics, but showed rapid degradation in soils under aerobic conditions. Under anaerobic conditions, BPA showed very little degradation (Kookana and Ying, 2005). The 2006 SCVWD study detected BPA in one groundwater sample (SCVWD, 2006). In the data analysis conducted for this project, BPA was not observed in any recycled water sources. Hence, BPA is ranked in category D) Minimal Potential for Impact, and monitoring is not needed.

Summary Data for Di(2-Ethylhexyl)Phthalate (μg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.093	0.7	15	13%
Groundwater	0	0	0.147	27.1	1552	2.1%

Summary Data for NBBS (μg/l), Category E						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0.0075	0.032	0.27	12	67%
Groundwater	0	0	0.05	0.5	10	10%

2.5.4.4. Perfluorochemicals (PFCs)

Perfluorochemicals are a group of organic compounds that have hydrogen-based structures and are partially or fully fluorinated. PFCs are hydrophobic and oleophobic, which makes them useful in products such as non-stick surfaces and stain-resistant carpeting. PFCs include perfluorooctanesulfonate, perfluorooctanoate, perfluorononanoate, perfluorohexane sulfonate, and perfluorooctane sulfonamide (Nakata et al., 2006).

PFCs have a chemical structure that makes them very resistant to breakdown in the environment. PFCs are suspected to bioaccumulate, and they have been detected in fish, birds, marine mammals and humans (Luthy, 2007). Because PFCs are an emerging set of contaminants, information on fate and transport characteristics is limited. In a previous study conducted by SCVWD, PFCs were found in recycled water, surface water, and groundwater. However, the highest concentrations of PFCs were found in recycled water sources, particularly perfluorooctanesulfonate (PFOS) and perfluorooctanoate (PFOA), at concentrations of 340 and 110 ng/L, respectively. PFOS was also detected in groundwater at a concentration of 26 ng/L (SCVWD, 2006). In surface water, PFCs have been detected as high as 129 ng/L in Upper Silver Creek (SCVWD, 2006). Since only a few recycled water samples and one groundwater sample have been analyzed for PFCs, a full data analysis could not be performed. Because there is limited information on fate and transport of PFCs, they are ranked in category E) Insufficient Information and should be included for monitoring in the study.

2.5.4.5. Nitrilotriacetic acid (NTA) and Ethylenediaminetetraacetic Acid (EDTA)

Ethylenediaminetetraacetic acid (EDTA) and nitrilotriacetic acid (NTA) belong to aminopolycarboxylic acids which are multidentate synthetic organics (National Center for Sustainable Water Supply [NCSWS], 2001). Both EDTA and NTA are commonly present in domestic and industrial cleaning agents. They are found in laundry detergents, agricultural fertilizer, and pulp and paper production. Previous studies have shown that EDTA is relatively persistent in the subsurface, but has been shown to rapidly photodegrade when present in a complex with ferric iron. NTA has a relatively high susceptibility to biodegradation in soil and surface water (AWWA, 2001). A study of a recharge program at the Sweetwater Recharge Facility in Tucson, Arizona, showed EDTA removal of 0 and 80 percent at 3 meters and 38 meters below ground surface, respectively (Hyung, 2003). The same study showed NTA removals of 75% and 98% at the same respective depths. Similarly, another study found significant attenuation of NTA during river water infiltration and groundwater transport (Ding, 1999).

EDTA was detected in all recycled water samples, and over half of the groundwater samples. In general, EDTA concentrations in recycled water were much higher than groundwater concentrations. NTA results were not available for the data analysis. Both NTA and EDTA are ranked in category C) Inconclusive, and should be included for monitoring in the study.

Summary Data for EDTA (µg/l), Category C						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	6	19.5	105.383	305	6	100%
Groundwater	0	5	4.736	13	11	55%

2.5.4.6. Naphthalenedicarboxylic Acids (NDCs)

Naphthalenedicarboxylic acids (NDCs) are industrial chemicals that are suspected to be an oxidative transformation product of polycyclic aromatic hydrocarbons (PAHs), a constituent of petroleum products. Previous studies have detected NDCs in recycled water sources. Limited information is available on the environmental fate of NDCs. A laboratory study found that some NDCs can be slowly degraded biologically, but the results showed poor reproducibility. A field-scale study of recycled water application in Tucson, Arizona showed that a large percentage of NDCs were removed within the first 10 feet of the subsurface, but below that, the degradation was significantly slower (AWWA, 2001). A laboratory study of microbial degradation has been performed on one form of NDC, which identified two strains of bacteria that may degrade NDCs, although slowly and inefficiently. The microbial study results also showed poor reproducibility (Lefèvre et al., 1999). Other than these studies, very little information is available regarding the fate of NDCs in the environment. Analytical results for NDCs were not available for the data analysis. NDCs are ranked in category E) Insufficient Information, and should be included for monitoring in the study provided a laboratory capable of testing for this constituent is identified.

2.5.4.7. Perchlorate

Perchlorate (ClO_4^-) is a highly oxidized chlorine oxyanion used as an oxidizer in solid propellants for rockets, missiles, explosives, and pyrotechnics. Perchlorate can also be distributed through the use of certain fertilizers which are derived from evaporite deposits. Once in the environment, perchlorate is highly soluble and adsorbs poorly to soil. For these reasons, when perchlorate reaches groundwater, it can spread over large distances. Anaerobic biological reactors and ion exchange are effective measures in removing perchlorate. There is also concern for perchlorate accumulation in food plants because it is a human exposure route (Metcalf and Eddy, 2007).

Groundwater in portions of the Llagas Subbasin has been impacted with perchlorate, with several drinking water source wells being shut down due to concentrations of perchlorate. The State of California has issued an MCL for perchlorate at 6 µg/L. Perchlorate has been detected in two recycled water sources included in this study: PARWQCP and SWPCP. The detection frequency for groundwater is higher than for recycled water, but that is likely due to the perchlorate impact on the Llagas Subbasin. Due to its transport characteristics and presence in recycled water, perchlorate is ranked in category A) Significant Potential for Impact, and should be included for monitoring in the study.

Summary Data for Perchlorate (µg/l), Category A						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.922	12.3	18	11%
Groundwater	0	0	0.707	13	2223	13.0%

2.5.4.8. *Hexachlorocyclopentadiene*

Hexachlorocyclopentadiene is a semi-volatile compound used in multiple industrial processes, including manufacture of insecticides and flame retardants. In the environment, hexachlorocyclopentadiene sorbs strongly to soils, and once there, degrades quickly by either chemical hydrolysis or biodegradation. This chemical degrades even more quickly when exposed to sunlight, with a half-life in the range of a few minutes. In surface water, hexachlorocyclopentadiene is attenuated either through volatilization or photolysis (USEPA, 2006b). In the data analyzed for this study, hexachlorocyclopentadiene was detected in one of the 14 recycled water samples, with a concentration of 0.1 µg/L. The chemical was not detected in any groundwater samples. Due to strong attenuation of hexachlorocyclopentadiene, this constituent is ranked in category D) Minimal Potential for Impact. Monitoring for this constituent is not needed.

Summary Data for Hexachlorocyclopentadiene (µg/l), Category D						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.007	0.1	14	7%
Groundwater	0	0	0	0	1127	0.0%

2.5.4.9. Methyl Tertiary-Butyl Ether (MTBE) and Other Oxygenates

Oxygenates like methyl tertiary-butyl ether (MTBE) are added to gasoline to achieve more complete combustion and to improve air quality. Widespread use of oxygenates has lead to contamination in the environment, and consequently, some drinking water sources. Oxygenates are polar compounds, hence they adsorb poorly to soils and can migrate through aquifers easily (Metcalf and Eddy, 2007). However, most oxygenates volatilize readily, and they have been shown to degrade biologically, although not under natural conditions (USEPA, 2004).

The oxygenates included in the data analysis are MTBE, tertiary amyl methyl ether, ethyl tertiary butyl ether, and diisopropyl ether. None of these oxygenates were detected in recycled water samples. Hence, there is limited potential to impact groundwater.

2.5.4.10. Organophosphates

Tris(3-chloropropyl)phosphate and tris(2,3-dichloropropyl)phosphate are organophosphates that are suspected to be carcinogenic. Trisphosphates are used primarily in flame retardants but can also be found in specialized rubber products, elastomers, fiberglass resins, industrial paints, surface coatings and sealants (National Industrial Chemicals Notification and Assessment Scheme [NICNAS], 2001). These chemicals have been detected in surface water, groundwater, and recycled water, with the highest concentrations in recycled water (SCVWD, 2006). The ARWT Feasibility Project found that the concentrations of these chemicals in recycled water pose no health risk (SCVWD, 2004).

A Stanford University study of effluent discharge to the Santa Ana River found that trisphosphates were detected regularly in recycled water. The study also found that under wetland treatment, trisphosphates were partially removed (Gross et al, 2004). Other than this study, little information is available regarding the fate and transport of trisphosphates in the environment.

In the data analysis prepared for this study, trisphosphates were detected in all recycled water samples except one, with maximum concentrations of 0.46 µg/L of tris(2,3-dichloropropyl)phosphate and 0.42 µg/L of tris(3-chloropropyl)phosphate. Trisphosphates were not detected in any groundwater samples.

Because of the limited information in fate and transport, trisphosphates are ranked in category E) Insufficient Information, and should be included for monitoring in the study provided a laboratory capable of testing this constituent is identified.

Summary Data for Tris(2,3-dichloropropyl)phosphate (µg/l), Category E						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0.01	0.084	0.46	12	92%
Groundwater	0	0	0	0	10	0%

Summary Data for Tris(3-chloropropyl)phosphate (µg/l), Category E						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0.0165	0.068	0.42	12	92%
Groundwater	0	0	0	0	10	0%

2.5.4.11. Surfactants

Surfactants are a common component of most detergents. In the environment, surfactants can form a surface film, which reduces oxygen transfer. They can also alter the hydraulic properties of soils. Surfactants are often monitored collectively as methylene blue active substances (MBAS). MBAS are a group of chemicals that react with methylene blue under specific testing conditions. A study in Florida found low concentrations of MBAS in recycled water. Although MBAS were also found at low concentrations in groundwater, the study concluded they were not attributable to recycled water use, but rather runoff from residential areas or nearby streets (USGS, 1996).

Alkylphenol ethoxylates (APEOs) are a specific type of nonionic surfactants used in domestic and industrial products. APEOs and some of their metabolites are suspected to be EDCs. During wastewater treatment and in the environment, APEOs degrade into alkylphenol ethoxycarboxylates (APECs), carboxyalkylphenol ethoxycarboxylates (CAPECs), alkylphenols (nonylphenol (NP) and octylphenol (OP)), alkylphenol mono-ethoxylate (AP1EO), alkylphenol di-ethoxylate (AP2EO), and alkylphenol tri-ethoxylate (AP3EO) (Ying et al., 2002). The biotransformation of APEOs to APECs occurs under aerobic conditions during wastewater treatment, and has also been shown to occur in the environment under wetland treatment (Gross et al, 2004). Halogenated APECs and halogenated APEOs, which have both been found in recycled water samples, are chlorinated or brominated forms of APECs and APEOs created during wastewater disinfection.

The physiochemical properties of APEOs, particularly the high octanol-water coefficients (K_{ow}), suggest that APEOs can partition effectively into the soil. Previous studies have shown concentrations of APEOs in treated wastewater effluents ranging from <0.1 to 369 µg/L, and in sediments from <0.1 to 13,700 µg/kg (Ying et al., 2002).

Compared to APEOs, the degradation products have higher toxicity and are more persistent than the parent compounds. The degradation products also sorb more readily to soils and sediments (Thiele et al., 1997). In one study of soil aquifer treatment in Arizona, APEOs were removed in both anoxic and oxic conditions. Generally, the length of ethoxycarboxylate chain has been found to decrease with depth as water percolates through the vadose zone. At depths greater than 3 meters only the alkylphenoxy acetic acids (AP1ECs), carboxyalkylphenoxy acetic acids (CAP1ECs), and alkylphenols (APs) remained. Under aerobic conditions, NP and OP were found to decrease by 80 percent within a three meter depth. Under anoxic conditions, APs were found to increase by 38 percent at 3 meters below ground surface, and APEC and CAPEC were found to decrease by more than 95 percent at the same depth. For treatment of APEOs in groundwater recharge applications, alternating flooding and drying cycles for recharge appears to enhance APEO removal (Montgomery-Brown et al., 2003).

At the Las Positas Golf Course in Livermore, CA, which was irrigated with recycled water from the Livermore Water Reclamation Plant, concentrations of NP, AP1EC, and AP2EC were observed to reduce substantially from the recycled water to the groundwater (Hudson et al, 2005; LLNL, 2006). The attenuation of APEO metabolites was attributed to sorption. In addition, estrogenic bioassay tests showed reduction in estrogenic response from the recycled water to the groundwater.

In Gilroy, where the South County Regional Wastewater Authority (SCRWA) provides water recycling for irrigation, five groundwater wells from a farm location, and three groundwater wells from Christmas Hill Park were monitored for trace organic compounds (LLNL, 2006). The groundwater at these locations occurs at depths of less than 20 feet below ground surface. NP, NP1EC, and NP2EC were detected in the shallow groundwater. Detections of low level NP may have been sampling artifacts.

A study of a recharge program at the Sweetwater Recharge Facility in Tucson, Arizona, showed APEC removals of 30% and 93% at 3 and 38 meters below ground surface, respectively (Hyung, 2003). Similarly, a different study found significant attenuation of APECs during river water infiltration and groundwater transport (Ding et al., 1999). A previous SCVWD study detected APEOs and their degradation products consistently in recycled water sources, but did not detect these compounds in the surface or groundwater (SCVWD, 2006).

Concentrations of total surfactants were detected in every recycled water sample included in the data analysis, with concentrations ranging from 94 to 357 µg/L. Individual surfactants were also occasionally detected in the groundwater samples, but with lower concentrations and lower frequency. However, the reporting limit for the total surfactants analysis is much higher than the reporting limits for individual surfactants.

In addition to the general analysis for surfactants, some samples were analyzed for specific APEOs and their metabolites. AP1EO, AP2EO, and AP3EO were each detected in 10% to 13% of the recycled water samples, and AP1EO was detected in one groundwater sample. Overall, APEOs were detected in 20% of recycled water samples. APECs were detected more frequently, in 64% of the recycled water samples, and in 40% of groundwater samples. Specific APECs, identified by their mass-charge ratio, were also analyzed, and detection frequencies ranged from 40% to 50% in recycled water samples. Halogenated AP/APEOs were detected in 17% of the recycled water samples and halogenated APECs were detected in 92%. The halogenated AP/APEOs and APECs were not detected in any groundwater samples. Concentrations of NP and OP were detected more frequently in groundwater samples than recycled water samples, with two thirds of the groundwater samples showing some detection. Because surfactants and their degradation products have significantly varying fate and transport characteristics, APEOs, APECs, NP, and OP are ranked in category C) Inconclusive, and should be included for monitoring in the study using MBAS to measure surfactants.

Summary Data for Surfactants (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	94	131	162.000	357	14	100%
Groundwater	0	0	0.0856536	50	2356	7%

Summary Data for AP/APEO, Halogenated (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.003	0.026	12	17%
Groundwater	0	0	0	0	10	0%

Summary Data for AP1EO (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.019	0.14	15	13%
Groundwater	0	0	0.001067	0.016	15	7%

Summary Data for AP2EO (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.048	0.48	10	10%
Groundwater	0	0	0	0	15	0%

Summary Data for AP3EO (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.014	0.14	10	10%
Groundwater	0	0	0	0	15	0%

Summary Data for APEC m/z 235 (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0.27	2.044	9.2	10	50%
Groundwater	0	0	0.00253	0.018	15	20%

Summary Data for APEC m/z 249 (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.494	2.8	10	40%
Groundwater	0	0	0.002267	0.014	15	40%

Summary Data for APEC m/z 279 (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0.745	1.952	7.6	10	50%
Groundwater	0	0	0.0024	0.019	15	13%

Summary Data for APEC Total (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	1.35	3.599	18	14	64%
Groundwater	0	0	0.0072	0.039	15	40%

Summary Data for APEC, Halogenated (µg/l), Category C

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	1.45	3.145	14.8	12	92%
Groundwater	0	0	0	0	10	0%

Summary Data for NP/OP (µg/l), Category C						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.027	0.163	15	40%
Groundwater	0	0.012	0.0323	0.15	15	67%

2.6. Pathogens

Microbiological contaminants, including bacteria and viruses, are occasionally present in recycled water sources. Some microbial species, such as *Clostridium perfringens*, have resistance to chlorine disinfection and are more frequently found in recycled water sources. These contaminants have also impacted groundwater at some locations where recycled water is used for groundwater recharge.

2.6.1. Bacteria and Parasites

In the laboratory, bacteria can be monitored using several techniques. Heterotrophic plate count is one of the simplest and most frequently used methods. The heterotrophic plate count is a measurement of the total number of bacteria present in a water sample. It is usually reported in colony-forming units per milliliter (CFU/mL). In the data analysis for this study, recycled water sources showed much higher maximum heterotrophic plate count than groundwater samples. However, the median values for recycled water and groundwater were similar.

Three coliform counts are frequently used to monitor bacteria presence: total coliforms, fecal coliforms, and *E. Coli* coliforms. Total coliforms include a large group of bacterial species. Fecal coliforms is a measurement that isolates a specific subgroup of coliforms originating in feces. *E. Coli* is a specific species that can be isolated and measured. In the data analysis for this study, total coliforms were detected in a third of recycled water samples, and in one groundwater sample. Fecal coliforms and *E. Coli* coliforms were below detection in all except one of the recycled water samples. Legionella, another bacterium known to cause lung and gastrointestinal infections, was detected in one of the samples from SWPCP, but no other recycled water or groundwater samples.

Using high-volume sampling techniques with low detection limits, a study of several water reclamation plants in the Los Angeles area found that total coliforms were detected regularly, although the concentrations were always below the California Title 22 limits for reuse. This study also found evidence of microbial impact in groundwater in the area where recycled water was being used for recharge. A similar study in Arizona found a direct correlation between bacterial indicators in groundwater and distance from the recharge point of recycled water. However, the coliform concentrations in the groundwater at both sites were below the detection limits for routine monitoring. The concentrations could only be quantified using high-volume sampling techniques (AWWA, 2001).

In addition to the coliform counts for bacteria, there are two protozoan parasites that have been monitored in recycled water sources: cryptosporidium and giardia. Both of these are genera of pathogens that cause intestinal disease. In water, these protozoa are often found in a spore-like phase as cysts (giardia) or oocysts (cryptosporidium). Giardia cysts and cryptosporidium oocysts can survive some wastewater disinfection processes like chlorination. In the recycled water samples examined for the data analysis, giardia and cryptosporidium were both detected at low concentrations. Giardia was detected more frequently, in 27% of the samples. Neither of these pathogens were detected in groundwater. There is not enough information concerning the fate and transport of bacteria and parasites to evaluate the impacts to groundwater. Hence, bacteria and parasites are ranked as category E) Insufficient Information, and should be included for monitoring in the study.

Summary Data for Giardia (cyst/L), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.313	3.8	15	27%
Groundwater	0	0	0	0	20	0%

Summary Data for Fecal Coliforms (MPN/100ml), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.722	13	18	6%
Groundwater	0	0	0	0	5	0%

Summary Data for E. Coli (MPN/100ml), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.444	8	18	6%
Groundwater	0	0	0	0	5	0%

Summary Data for Coliforms, Total (MPN/100ml), Category E

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	8.056	110	18	33%
Groundwater	0	0	1.211	23	19	5%

Summary Data for Cryptosporidium Oocysts (oocysts/L), Category E						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.060	0.7	15	13%
Groundwater	0	0	0	0	20	0%

Summary Data for Heterotrophic Plate Count by R2A (CFU/ml), Category E						
	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	117	4770.610	64000	18	83%
Groundwater	2	110	417.47	2000	19	100%

2.6.2. Viruses

Bacteria and parasites can be inactivated through death or dilution relatively quickly in the environment. However, the survival of viruses poses a concern (Metcalf and Eddy, 2007). There is less information available for the fate and transport of viruses than for bacteria. Although virus testing was a part of both the Los Angeles and Arizona studies discussed above, neither study found significant evidence of virus impacts caused by recycled water application. In other laboratory experiments, some viruses have been found to adsorb readily to soil particles, while others transport more quickly.

A field-scale experiment on virus transport in the environment was performed in Los Angeles County in 1997 (AWWA, 2001). The experiment included spiking recycled water with a concentrated stock solution of bacteriophage (a virus that targets bacteria) as well as a bromide tracer, and applying it within a large recharge facility. The bacteriophage used in this experiment was a surrogate for human viruses commonly found in recycled water. Groundwater concentrations at the site were monitored at depths of five and ten feet over a period of two days. Concentrations of the virus were detected within 4 hours at 5 feet below ground surface, and in 6 hours at 10 feet below ground surface. The maximum virus concentration observed in both wells was approximately two orders of magnitude less than the concentration discharged at the surface. Since the bromide concentrations did not change significantly over the 10-foot interval, it was determined that the reduction in concentrations was not caused by dilution, but the virus was attenuated by removal and/or inactivation. Below 10 feet, the virus was also detected, but not at quantitative levels (AWWA, 2001).

The data analysis for this study included results for total culturable virus assay. The results were below detection for all recycled water samples, but a value of 0.11 most-probable-number per 100 liters was found in one groundwater sample. Since viruses were not detected in any recycled water samples, viruses are ranked in category D) Minimal Potential for Impact, and do not need to be monitored.

2.7. Radioactives

Alpha emitters are radionuclides that give off alpha particles. An alpha particle is similar to a helium nucleus with two protons and two neutrons. Alpha emitters, which can be natural or anthropogenic, include americium-241, plutonium-236, uranium-238, thorium-232, radium-226, radon-222, and polonium-210. Alpha emitters are used in industry as static eliminators, in smoke detectors, and in cancer treatment (USEPA, 2007b).

Alpha particles do not travel far in the environment; their energy is quickly lost in the air, within a few centimeters. Once an alpha particle has lost its energy, it becomes helium. Generally, external exposure of alpha particles is less of a concern than internal exposure because they lack the energy to penetrate the outer layer of human skin. However, inhalation, ingestion, or absorption into blood stream can increase the risk of cancer. In particular, inhalation of alpha emitter has been known to cause lung cancer (USEPA, 2007b).

Beta emitters are radionuclides which give off beta particles. Beta particles are smaller than alpha particles, having 1/2000 of a proton’s mass. Beta emitters, which can be natural or anthropogenic, include tritium, cobalt-60, strontium-90, carbon-14, technetium-99, iodine-129, iodine-131, cesium-137, and phosphorus-32. Beta emitters are used in medical diagnosis, imaging and treatment (USEPA, 2007b). Beta particles may travel several feet before they hit solid material. Beta radiation can have acute and chronic health effects. Direct exposure to beta particles is considered hazardous; strong sources of beta particles can redden or burn skin. Inhalation and ingestion are of greater concern because they damage living tissue (USEPA, 2007b).

In a previous SCVWD study, levels of gross alpha and beta emitters in surface water, groundwater, and recycled water were found below drinking water regulations or threshold values as determined by the laboratory (SCVWD, 2004). The USEPA and CA MCL for gross alpha particle activity are 15 picoCuries per liter. The MCL for beta particles is specified in millirems per year of exposure, but as a general guideline, gross beta emissions less than 50 picoCuries per liter are considered safe for drinking water (USEPA, 2003). Both alpha and beta radiation were found at higher levels in recycled water samples than in groundwater samples in the data analysis. However, the maximum detected values for both measurements were below the respective MCLs.

Radium-228, a beta-particle-emitting radioactive metal, was detected in one of the recycled water samples at 1.1 picoCuries per liter, but since only four samples were analyzed for radium-228, there is insufficient data to fully characterize it. A specific MCL has not been established for radium-228, but the MCL for combined radium-226 and radium-228 is 5 picoCuries per liter. Since radium-226 was not detected in any recycled water samples, all recycled water samples were below the MCL for radium-226 and radium-228. Because the radioactive concentrations in recycled water are less than drinking water standards, they are ranked as category D) Minimal Potential for Impact, and are not recommended for monitoring in the study.

Summary Data for Radium 228 (pci/l), Category D

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	0	0.275	1.1	4	25%
Groundwater	0	0	0.0920	5.67	687	9.8%

Summary Data for Alpha, Gross (pci/l), Category D

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	0	3.2	2.59	6.7	17	65%
Groundwater	0	0.72	1.49	470	3965	70%

Summary Data for Beta, Gross (pci/l), Category D

	Minimum	Median	Mean	Maximum	Count	Detect Frequency
Recycled Water	5.2	11	11.83	19	17	100%
Groundwater	0	1.105	2.09	34	562	64%

2.8. Conclusions

The constituents of most concern that need to be monitored are those which are likely to affect groundwater, category A) Significant Potential for Impact. Constituents that belong to category A) are those that are likely to negatively impact groundwater resources based on the available information on the fate and transport pathways and the data analysis. Those that fall in this category include ions (e.g. magnesium, calcium, sodium, sulfate, chloride), DOC, TOC, TDS, and perchlorate. Magnesium, calcium, and sodium are especially of concern as they may potentially affect soil permeability.

In addition to constituents in category A), constituents that fall in categories C) Inconclusive and E) Insufficient Information should also be monitored. Constituents that belong to either of these categories have a potential to negatively impact groundwater. However, there are too many unknowns with these constituents to determine with confidence whether or not there will be negative impacts. Constituents in category C) include boron, surfactants (represented by MBAS), THMs, terbuthylazine, cyanide, phosphate, nitrate, nitrite, EDTA, NTA, and NDMA. Constituents in category E) include aldicarb sulfoxide, HAA5, bromochloroacetic acid, PHaCs, NDCs, bacteria and parasites, NBBS, PFCs, and trisphosphates. More studies are needed of the constituents in category E) to properly evaluate their effects on groundwater.

Category D) are constituents that are not expected to impact groundwater resources either because 1) constituent concentrations in recycled water are less than or similar to those in groundwater or drinking water standards or 2) fate and transport mechanisms suggest that constituents will be attenuated before reaching groundwater. Constituents in these categories include bromate, radioactives, hardness, TSS, silica, metals (aluminum, cadmium, copper, iron, lead, manganese, nickel, zinc), fluoride, lindane, heptachlor epoxide, 1,4-dioxane, DEHP, BPA, hexachlorocyclopentadiene, VOCs (xylenes and carbon tetrachloride), oxygenates (MTBE, tertiary amyl methyl ether, ethyl tertiary butyl ether, diisopropyl ether), turbidity, viruses, and estrone.

Category B) includes alkalinity, DO, ORP and pH. These constituents are important to monitor as they provide insight to how other constituents in recycled water will behave through soil.

3. SOIL AQUIFER PLUGGING

In addition to the potential effects recycled water use can have on groundwater, some characteristics of recycled water have been shown to cause reductions in hydraulic conductivity in surface soils. Over time, this effect may actually cause a change in the quantity of water that percolates from the surface and recharges groundwater. Aquifer soil plugging can originate from three mechanisms: chemical plugging due to clay expansion/dispersion and/or mineral precipitation, physical plugging due to particulate matter, and biological plugging due to bacterial growth (SCVWD, 2004).

3.1. Clay Expansion / Dispersion

The potential for clay expansion and dispersion caused by contact with recycled water has been investigated extensively in a previous study conducted on behalf of SCVWD (Geologica, 2003). In soils with expansive clays, hydraulic conductivity can be reduced as a result of cation exchange resulting in swelling from increased interparticle spaces between clay layers, effects of dispersion, or destruction of structural aggregates.

Hydraulic conductivity changes are caused by changes in the size of the intra-particle spacing, which separates clay layers or inter-particle spaces. When this space expands, the pore sizes are reduced, which reduces the hydraulic conductivity. Clay surfaces are negatively charged, and cations such as sodium, magnesium, and calcium are attracted to this space. When sodium is adsorbed to the inter-particle surfaces, replacing calcium and magnesium ions, the spacing expands and the clay swells. Hence, recycled water with high sodium concentrations (or high TDS levels) and a high sodium adsorption ratio (SAR) can reduce hydraulic conductivity. SAR describes the concentration of sodium relative to calcium and magnesium. Table I-2-3 of this report includes calculated SAR values prepared using the analyses for the recycled water samples included in the data analysis. Expansion is also dependent on the exchangeable sodium percentage which characterizes the relative proportions of cations on the clay surfaces.

Of the common types of clay, montmorillonite has been observed to expand the most because it has the highest base exchange capacity. The effect is less prominent in soils with illite-vermiculite clay and even less prominent in kaolinite clays. Montmorillonite clays are known to exist throughout Santa Clara County soils. The coefficient of linear expansion, liquid limit, plasticity index, and percentage of montmorillonite by x-ray diffraction are measurable physical parameters of the soil that can be correlated to the potential change in hydraulic conductivity (Geologica, 2003).

The study also determined that recycled water irrigation could be used without adverse reaction at locations within Santa Clara County with low clay and/or low expansive clay content. Gypsum-treatment of soils can reduce the adverse impacts of recycled water on permeability. Similarly, recycled water sources can be treated with gypsum, sodium removal, or blending with other water sources to reduce the potential for affecting hydraulic conductivity (Geologica, 2003). However, this could potentially increase the transport of constituents of concern in groundwater.

In terms of water chemistry, the study found that recycled water had greater ion exchange of calcium and magnesium with the soils compared to other irrigation sources. The study concluded that additional testing is warranted to evaluate the impacts of recycled water on groundwater by focusing on ion exchange and percolating water chemistry. Additional hydraulic testing on a range of soils and waters can be used to determine the range of SAR and salinity that is safe from adverse impacts on permeability. It may also be important to evaluate what effect cycling between rainwater and recycled water due to seasonal changes will have on hydraulic conductivity (Geologica, 2003).

3.2. Other Plugging Mechanisms

3.2.1. Mineral Precipitation

Mineral precipitation depends on pH, temperature, and availability of large surface areas for precipitate deposition. Calcium carbonate, iron oxides, and manganese oxides are examples of insoluble compounds which may form. The ARWT Feasibility Project determined that mineral precipitation does not significantly alter hydraulic conductivity because precipitation kinetics are slow and it occurs in isolated pore spaces. In addition, the total volume of precipitation is not significant enough to change hydraulic conductivity (SCVWD, 2004). The correlation between expansive clay content of soils and change in hydraulic conductivity as a result of irrigation with recycled water also suggests that mineral precipitation in the short term is not a predominant process changing hydraulic conductivity in this situation (Geologica, 2003).

3.2.2. Physical Plugging

Physical plugging can be caused by accumulation of suspended solids from recycled water. Suspended solids can be inorganic such as silt, clay, fine sands, or flocs, or can be organic such as algal cells or decaying organic matter. The ARWT Feasibility Project determined based on past experiments that a total suspended solids (TSS) level less than 2,000 µg/L will not cause significant physical plugging. However, other research in the same aquifer system has shown that a level as high as 25,000 µg/L will not have adverse effects (SCVWD, 2004). Although the effect of the accumulation of solids may vary depending on soil permeability and porosity, it is most likely that the soil that is currently irrigated will be able to accommodate the range of suspended solids found in recycled water, as they are less than the range of storm water runoff which is mitigated by natural infiltration.

3.2.3. Biological Plugging

Biological plugging occurs due to in-situ bacterial growth. The accumulation of cells and waste products contribute to plugging of soil pores. The presence of biological contaminants in recycled water may contribute to this issue, but biological plugging can be effectively managed with disinfection of recycled water. The growth of biological material requires an energy and nutrient source. Growth is enhanced by warmer temperatures, sunlight, and greater concentrations of nutrients, of which at least the first two are not present in the subsurface (SCVWD, 2004).

3.3. Conclusions

Further investigation of soil aquifer plugging via clay expansion and dispersion is recommended. Recycled water with high SAR levels can affect the hydraulic conductivity of soil and hence the rate of percolation to groundwater resources. This effect is most commonly seen with soils that have high base exchange capacity like montmorillonite clays. Because Santa Clara County has such clays in its soil, aquifer plugging is a concern.

Further investigation of soil aquifer plugging due to mineral precipitation, physical plugging, and biological plugging is not recommended. These other mechanisms are not as likely to significantly affect groundwater resources.

4. MODELING TOOLS

The next phase of this project is the fate and transport evaluation, which will include use of a model to simulate the migration of recycled water constituents through the vadose zone. During the literature review, four of these analytical models were identified: PHREEQ, HYDRUS, MINTEQA2, and Soil Attenuation Model (SAM). The four modeling programs can potentially be used to characterize fate and transport of recycled water constituents.

4.1. PHREEQ

PHREEQ is a modeling program developed by USGS to characterize speciation, batch-reaction, one dimensional transport, and perform inverse geochemical calculations. PHREEQC is the latest version of PHREEQ written in the C programming language. PHREEQC is capable of performing a range of low-temperature aqueous geochemical calculations.

Version 2 of PHREEQC includes features for dispersion/diffusion and stagnant zones in one-dimensional transport calculations, kinetic reactions with user-defined rate expressions, formation/dissolution of ideal/multicomponent/nonideal binary solid solutions, fixed volume or fixed pressure phases, variation in the number of surface or exchange sites with the dissolution/precipitation of minerals or kinetic reactions, isotope mole balances in inverse modeling calculations, and multiple sets of convergence parameters. Version 2 also allows users to print user-defined quantities to a primary output file or to a spreadsheet-compatible file (USGS, 2005).

Advantages

Based on an ion-association aqueous model, PHREEQ is capable of speciation and saturation-index calculations. It can perform one-dimensional transport calculations involving reversible reactions. It can model transformation in the aqueous phase, gas phase, and solid-solution. The model can also address transformation involving mineral, surface-complexation, and ion-exchange equilibria. It can also account for irreversible reactions, which include specified mole transfers of reactants, kinetically controlled reactions, mixing of solutions, and temperature changes. In addition, it is capable of inverse modeling, which finds sets of mineral and gas mole transfers that account for differences in composition between waters, within specified compositional uncertainty limits (USGS, 2005).

Disadvantages

PHREEQ requires a lot of input data that is very specific to the soil type, including the concentrations of every ion present that may react with the water constituents. Since this information will be very location-specific, the model results may not be applicable over a larger area, such as the entire Santa Clara and Llagas Subbasins.

4.2. HYDRUS

HYDRUS is a finite element model that simulates movement of water, heat, and multiple solutes in a media that is variably saturated. The model was developed jointly by scientists at the University of California at Riverside and the Agricultural Research Service division of the US Department of Agriculture. HYDRUS-1D is a one-dimensional public domain version of the HYDRUS model. HYDRUS has also been developed in two- and three-dimensional versions. In HYDRUS-1D, the Richards equation is used for saturated-unsaturated water flow and the Fickian advection/dispersion equations are used for heat and solute transport (Šimunek et al., 2005b).

The program can account for unsaturated flow, water uptake and transpiration by plants, evaporation from soil surface, solute adsorption by the solid phase, and solute degradation. The current version 3.0 includes simulation of preferential flow of water and dissolved constituents through the unsaturated zone using a hierarchy of modules of increasing complexity. The modules account for the presence of immobile water, exchange of water or solutes between solid macropores and the soil matrix, and possible water flow and solute transport in both the macropores and micropores. Version 3.0 also includes options to simulate the transport of viruses, bacteria, and colloids in the soil. Simulation includes provisions for kinetic attachment/detachment of colloid or pathogens to the solid phase, physical straining of colloid particles by the solid phase, and possible accumulation at air-water interfaces when the soil becomes unsaturated (Šimunek et al., 2005a).

A review of three projects conducted by the Agricultural Research Service confirmed that HYDRUS is a valuable tool in for analyzing and designing irrigated agricultural systems. The three projects included in the review included analyzing drip irrigation systems, simulating the effects of salinity and drought stress on root water uptake, and using inverse modeling to assess upward water flow from shallow groundwater (Skaggs et al., 2005).

HYDRUS can also be coupled with other software packages. Šimunek et al. (2005) coupled HYDRUS to several other packages including UNSATCHEM, the PHREEQ biogeochemical code, and Constructed Wetlands 2D (CW2D). The coupled model of HYDRUS and UNSATCHEM has been used to make quantitative predictions on the effects of salinity on plant growth and the amount of water and amendment required to reclaim salt-affected soil profiles. HP1, a coupling of HYDRUS and PHREEQC, accounts for complexation, cation exchange, surface complexation, precipitation-dissolution and redox reactions. The combined model of CW2D and the two-dimensional version of HYDRUS characterizes biochemical transformation and degradation processes in subsurface flows in constructed wetlands and includes biochemical degradation and transformation process for organic matter, nitrogen, and phosphorus. Biochemical components in the CW2D program are dissolved oxygen, organic matter (readily biodegradable, slowly biodegradable, inert), nitrogen compounds (ammonium, nitrite, nitrate, dinitrogen), inorganic phosphorus, and microorganisms (heterotrophic, autotrophic). The model assumes that heterotrophic bacteria are responsible for hydrolysis, mineralization of organic matter and denitrification, and autotrophic bacteria are responsible for nitrification (Šimunek et al., 2005a).

The Agricultural Research Services recently performed a research project to improve HYDRUS by implementing new processes and by testing the software against experimental data. The project plan included improved capabilities for simulating 3D transport problems, preferential flow as modeled with alternative dual-permeability models, multicomponent solute transport as applied to toxic trace elements, energy balance at the soil service, overland flow to improve the design of surface irrigation systems, and colloid and colloid-facilitated transport.

Advantages

HYDRUS-1D is capable of one dimensional transport of multiple solutes. Transport equations can account for nonlinear and non equilibrium reactions between the solid and liquid phases, linear equilibrium reactions between the liquid and gaseous phases, zero order production, and two first-order degradation reactions: one which is independent of other solutes, and one which provides coupling between solutes involved in sequential first-order decay reactions. Also, HYDRUS-1D provides the option of choosing different methods to represent parts of the model.

Disadvantages

HYDRUS-1D does not directly consider geochemical reactions; however degradation rates can be input to represent geochemical transformations. HYDRUS-1D results may also be very sensitive to parameters which are variable across the entire Santa Clara and Llagas groundwater subbasins, such as soil characteristics.

4.3. MINTEQA2

MINTEQA2 is a model developed by USEPA for geochemical equilibrium speciation for dilute aqueous systems. Adsorption data are not included in the database as they are left to the user to select for each specific problem. Seven adsorption models are available to match the adsorption input data. An associated program called PRODEFA2 has been incorporated into MINTEQA2 to assist with creating the input files (USEPA, 1991).

A Windows-based implementation of MINTEQA2, Visual MINTEQ, is available for free download. Visual MINTEQ includes ion speciation using equilibrium constants, solubility calculations involving solid phases, adsorption calculations with adsorption isotherms, ion exchange calculations using the

Gaines-Thomas formalism, metal-humic complexation, calculations for redox couples and gases, sweep runs in which one parameter is varied, and titrations (KTH, 2007).

Advantages

The model is useful for characterizing equilibrium mass distribution for dissolved species, adsorbed species, and multiple solid phases. MINTEQA2 includes a comprehensive thermodynamic database of equilibrium constants which can be modified if data are incomplete or inadequate to a specific problem.

Disadvantages

MINTEQA2 does not model the transport of constituents, only physical and chemical equilibrium. Hence, it cannot be used to estimate transport of constituents to groundwater.

4.4. Soil Attenuation Model (SAM)

SAM provides conservative estimates soil to groundwater contaminant releases based on annual rainfall, soil type, depth to groundwater and hydrogeological properties.

Advantages

SAM is a very simple model to implement, requiring minimal data input compared to other models. SAM can predict the upperbound constituent concentrations in groundwater based on soil concentrations. It can also back-calculate a lower bound soil site specific target level based on the applicable risk-based screening level at the groundwater point of exposure. SAM can be used for porous media soils impacted by either organic or inorganic constituents, in the absence of mobile non-aqueous phase liquids (Connor et al., 1997).

Disadvantages

The lack of consideration for geochemical reactions makes SAM inaccurate for many constituents. Furthermore, in the base version of this model, volatilization and biodegradation processes are neglected for simplicity. As discussed in Section 2, there are several recycled water constituents where these processes are expected to have a significant effect.

4.5. Recommendations

Based on the advantages and disadvantages of each model, HYDRUS-1D is recommended as the most suitable model for soil attenuation modeling. HYDRUS-1D can model the transport of multiple solutes in one dimension. It can account for solute transformation in the solid-aqueous phase, gas-aqueous phase, zero and first order degradation. Although HYDRUS-1D does not account specifically for geochemical reactions, inputs for degradation rates can be used which will serve the purpose of this study. The issue of sensitivity to input parameters can be accounted for by testing the model using a range of potential inputs. For more detailed investigations, the 2D or 3D versions of HYDRUS could be implemented, but since this modeling is intended to apply generally to the entire Santa Clara and Llagas subbasins, the 1D version is more suitable.

The other models discussed above have significant drawbacks which make them less valuable for this study. SAM is not suitable for modeling because of the lack of attenuation mechanisms such as volatilization and biodegradation. MINTEQA is not suitable because it does not model solute transport. PHREEQ can account for multiple physical and chemical processes that affect solute transport, but the results cannot be applied to a large area, since the input data is very specific to soil characteristics which are variable across the study area.

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Ying, G., Williams, B., Kookana, R., 2002, Environmental Fate of Alkylphenols and Alkylphenol Ethoxylates – A Review, Environment International, Vol. 28, Issue 3, pp. 215-226.

Ying, G. and Kookana, R.S., 2006, Environmental Fate of Endocrine Disrupting Chemicals in Soil, 5th International Conference on Pharmaceuticals and Endocrine Disrupting Chemicals in Water, National Ground Water Association.

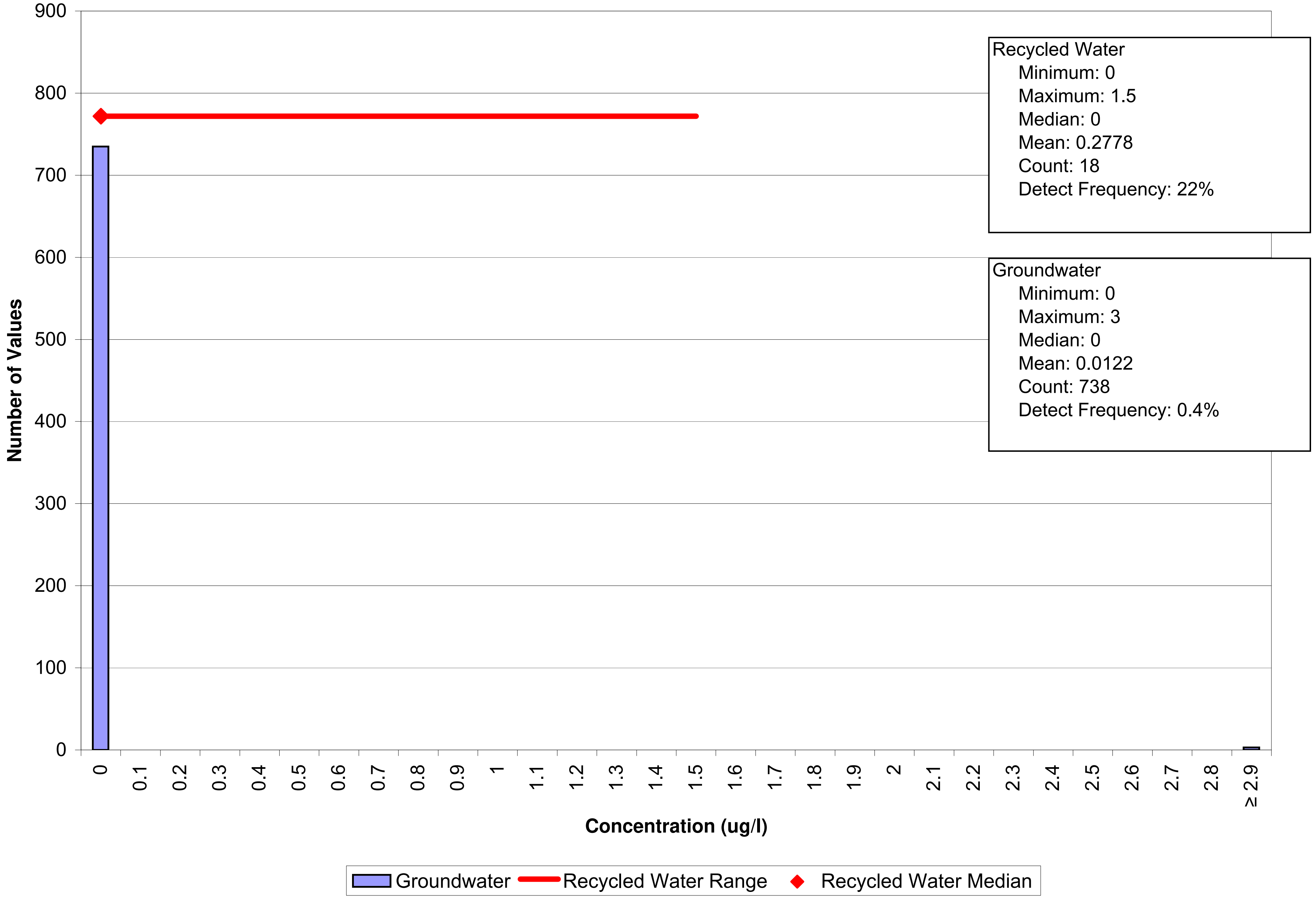
Zhou, Q., McCraven, S., Garcia, J., Gasca, M., Johnson, T.A., Motzer, W.E., 2009, Field evidence of biodegradation of N-Nitrosodimethylamine (NDMA) in groundwater with incidental and active recycled water recharge, Water Research 43, 793-805.

APPENDICES

APPENDIX I-A

HISTOGRAMS FOR GROUNDWATER AND RECLAIMED WATER CHEMISTRY

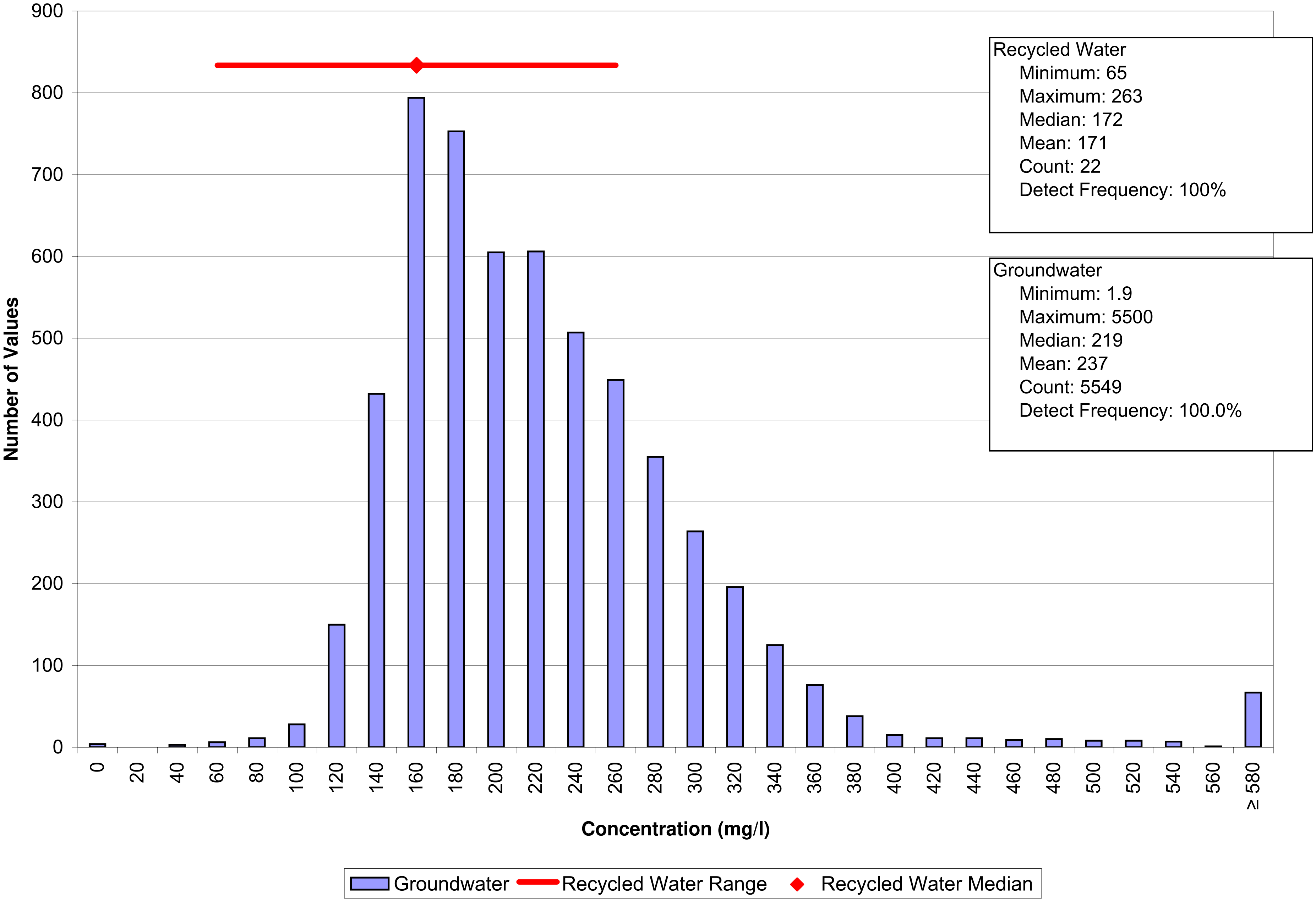
Aldicarb Sulfoxide



Recycled Water
Minimum: 0
Maximum: 1.5
Median: 0
Mean: 0.2778
Count: 18
Detect Frequency: 22%

Groundwater
Minimum: 0
Maximum: 3
Median: 0
Mean: 0.0122
Count: 738
Detect Frequency: 0.4%

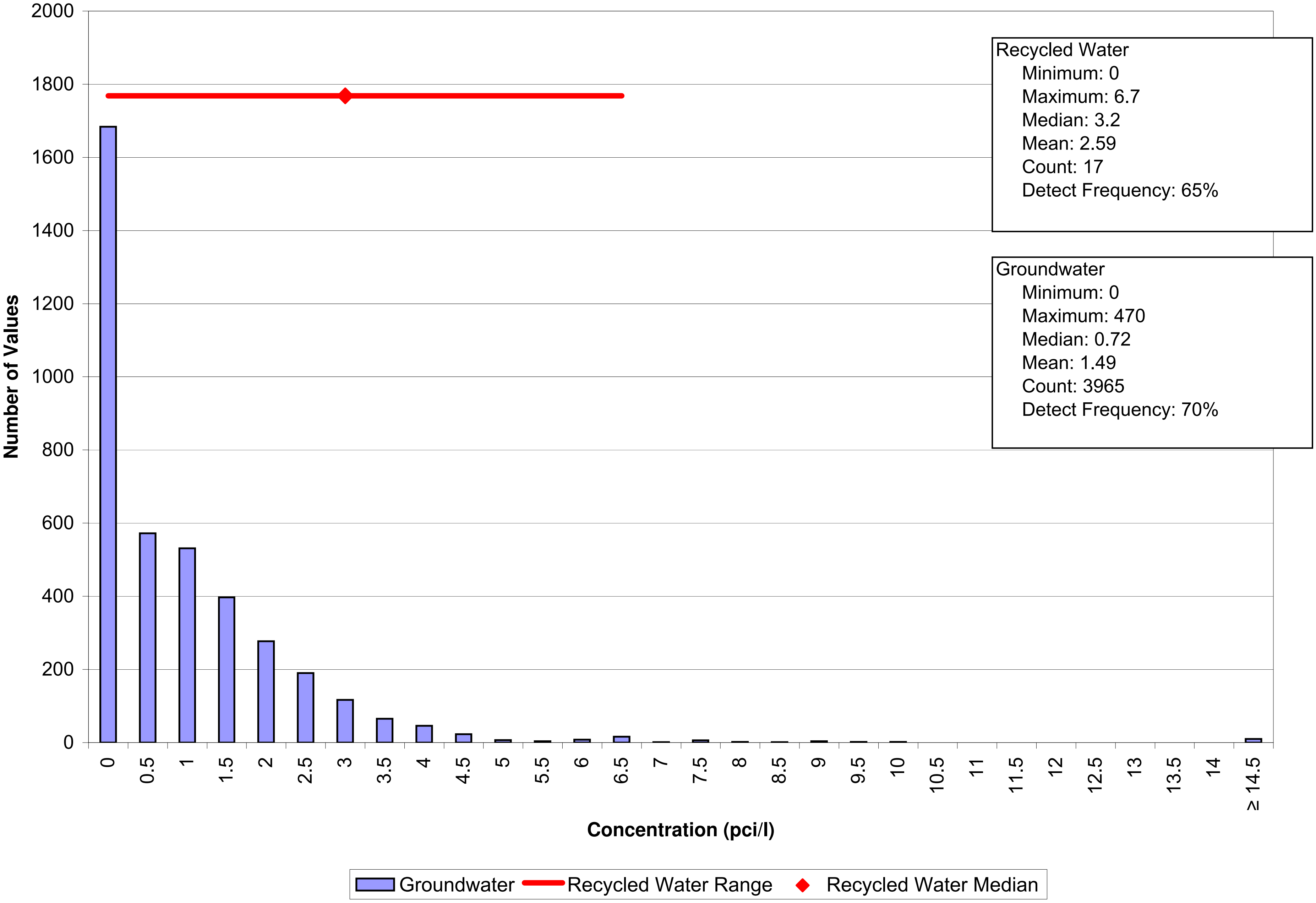
Alkalinity (Total) As CaCO3



Recycled Water
Minimum: 65
Maximum: 263
Median: 172
Mean: 171
Count: 22
Detect Frequency: 100%

Groundwater
Minimum: 1.9
Maximum: 5500
Median: 219
Mean: 237
Count: 5549
Detect Frequency: 100.0%

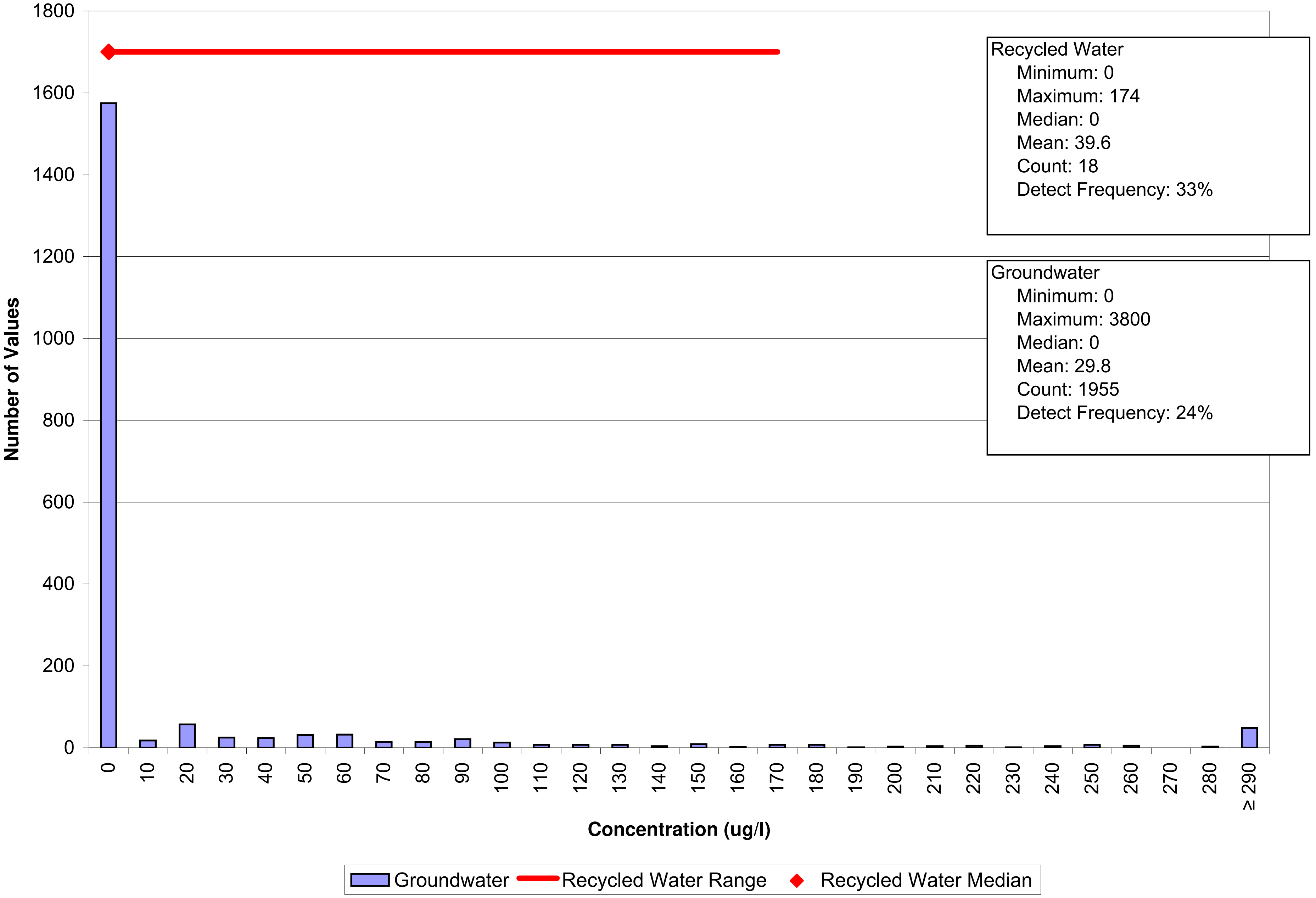
Alpha, Gross



Recycled Water
Minimum: 0
Maximum: 6.7
Median: 3.2
Mean: 2.59
Count: 17
Detect Frequency: 65%

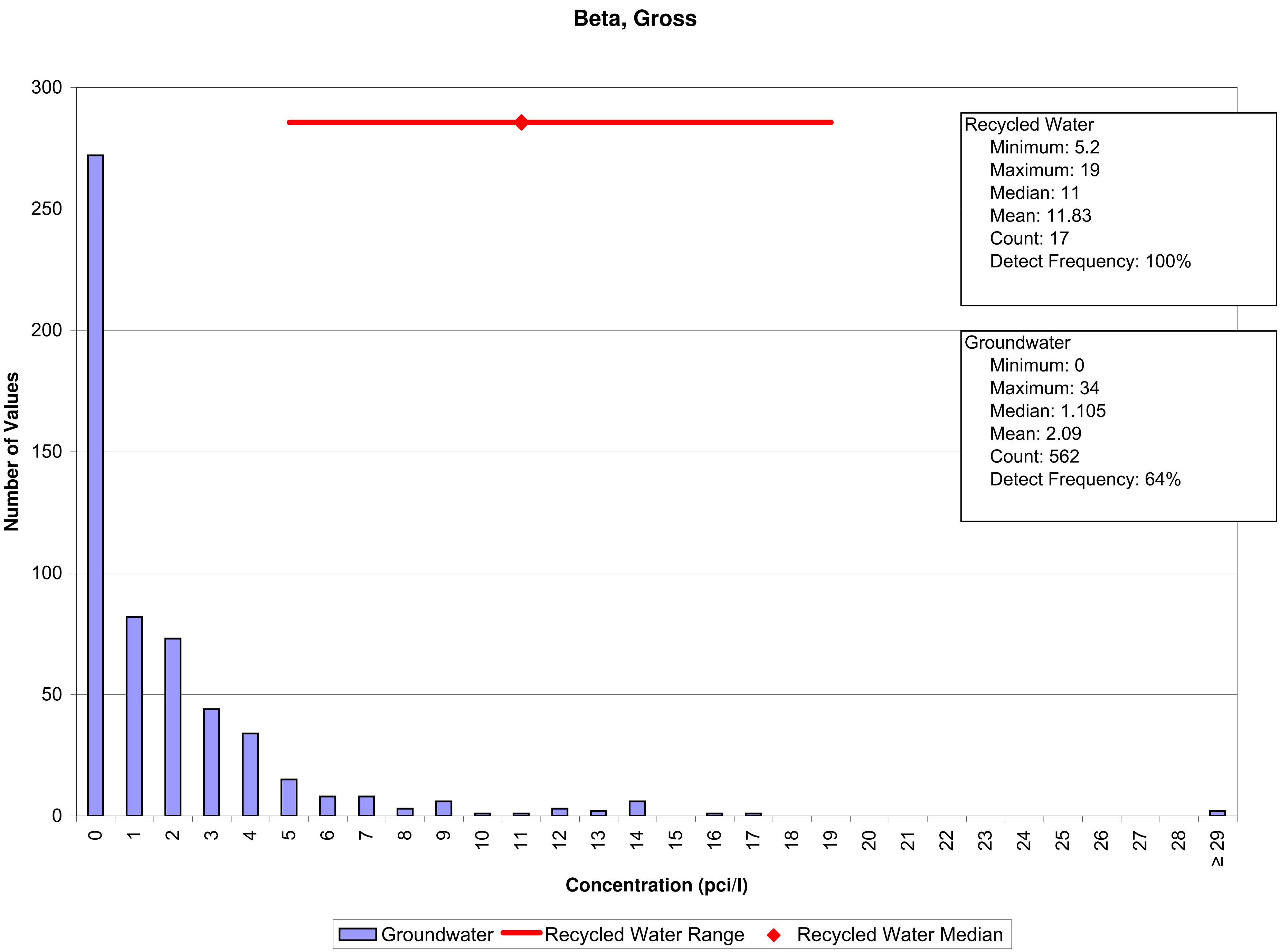
Groundwater
Minimum: 0
Maximum: 470
Median: 0.72
Mean: 1.49
Count: 3965
Detect Frequency: 70%

Aluminum

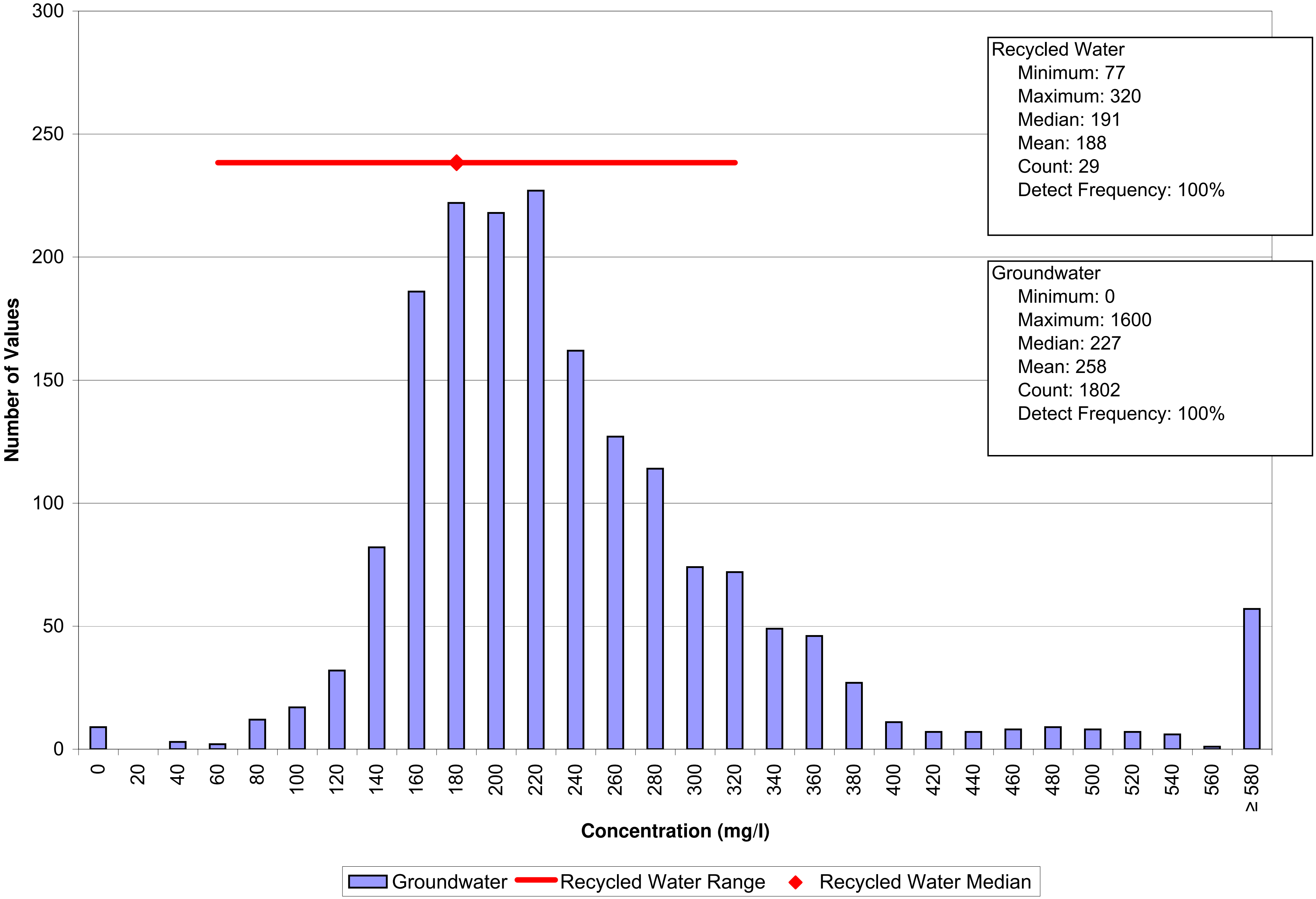


Recycled Water
- Minimum: 0
- Maximum: 174
- Median: 0
- Mean: 39.6
- Count: 18
- Detect Frequency: 33%

Groundwater
- Minimum: 0
- Maximum: 3800
- Median: 0
- Mean: 29.8
- Count: 1955
- Detect Frequency: 24%

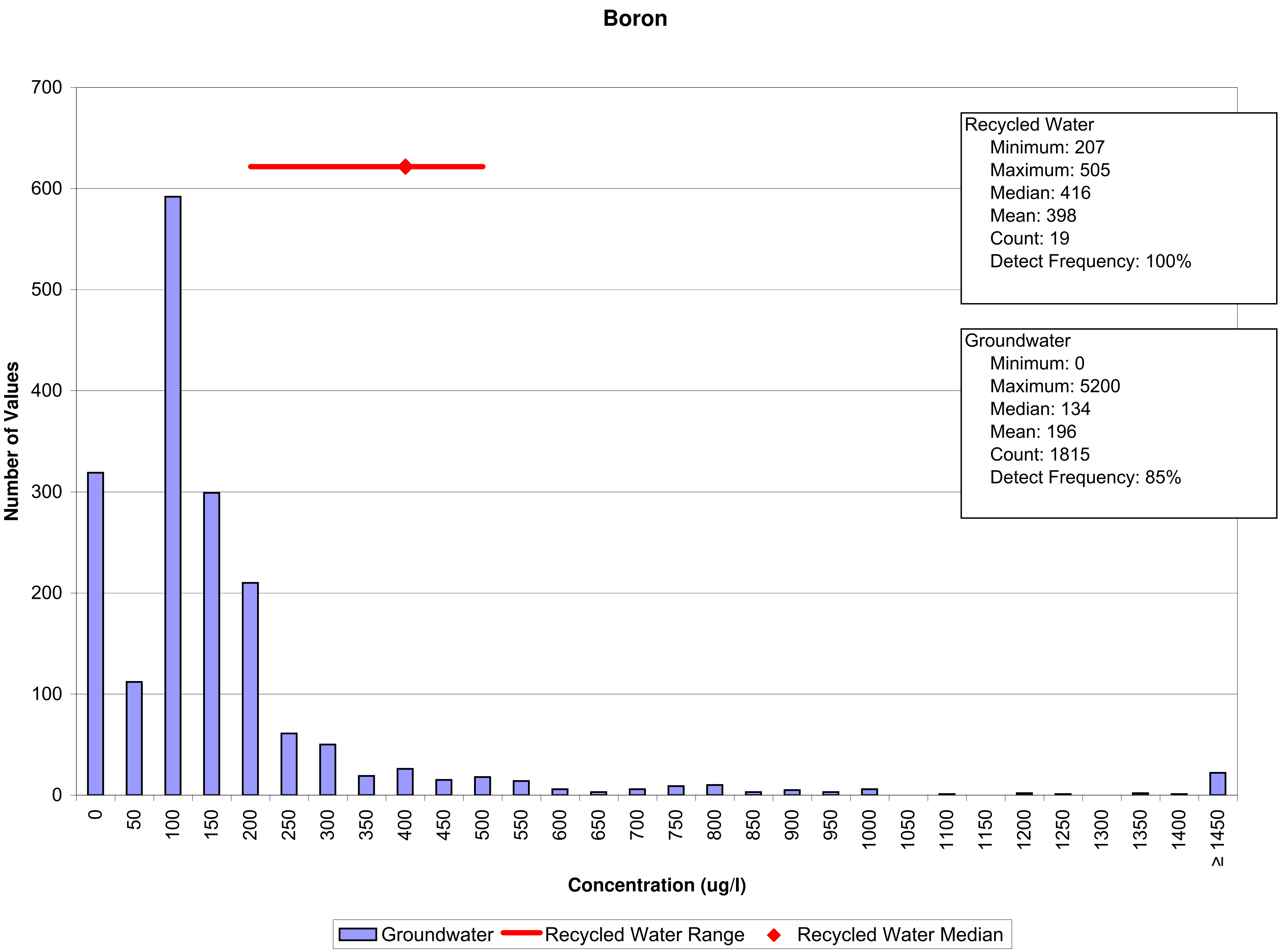

Beta, Gross
300
250
200
150
100
50
0
Number of Values
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
≥ 29
Concentration (pci/l)
Recycled Water
Minimum: 5.2
Maximum: 19
Median: 11
Mean: 11.83
Count: 17
Detect Frequency: 100%
Groundwater
Minimum: 0
Maximum: 34
Median: 1.105
Mean: 2.09
Count: 562
Detect Frequency: 64%
Groundwater
Recycled Water Range
Recycled Water Median

Bicarbonate Alkalinity

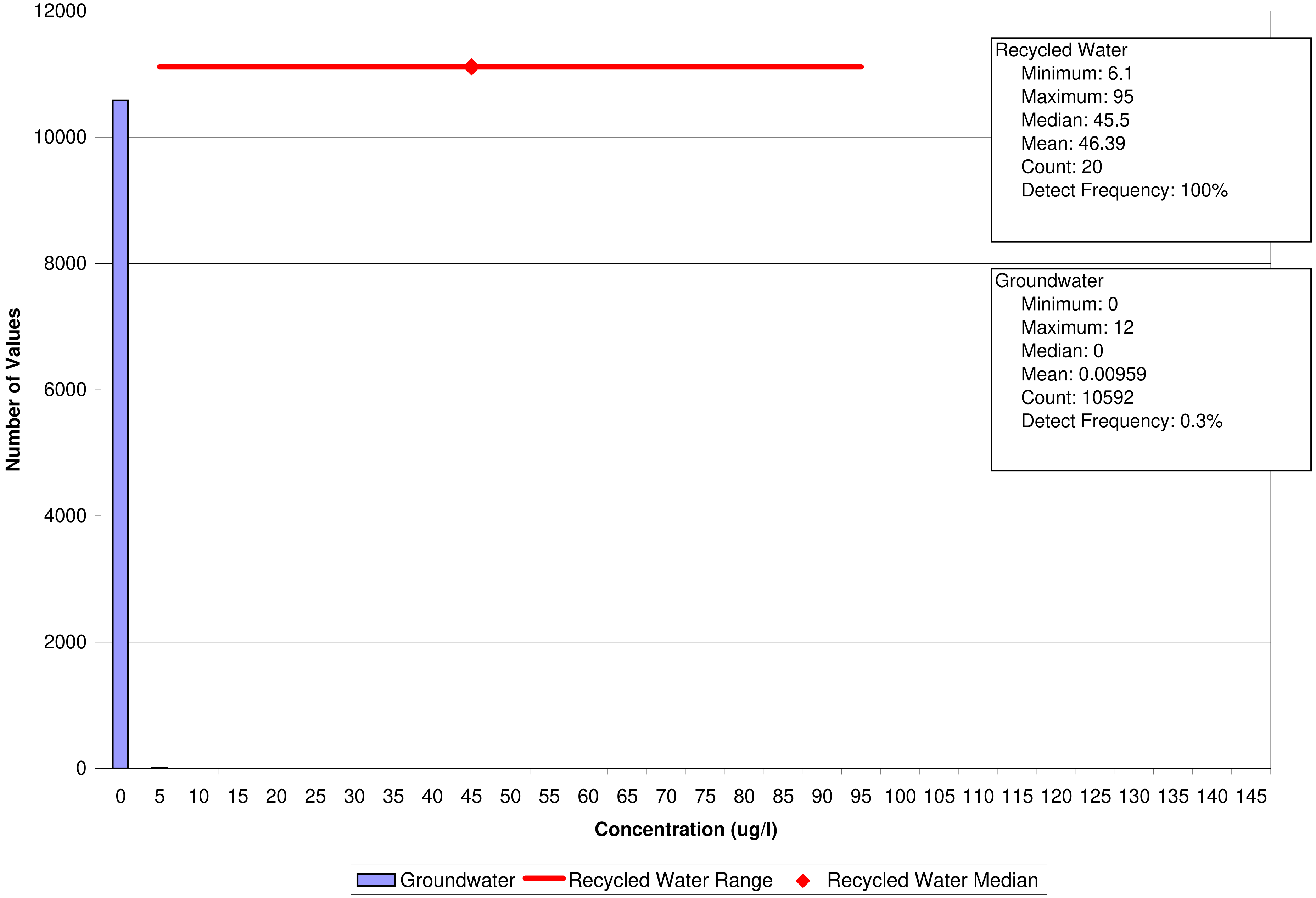


Recycled Water
Minimum: 77
Maximum: 320
Median: 191
Mean: 188
Count: 29
Detect Frequency: 100%

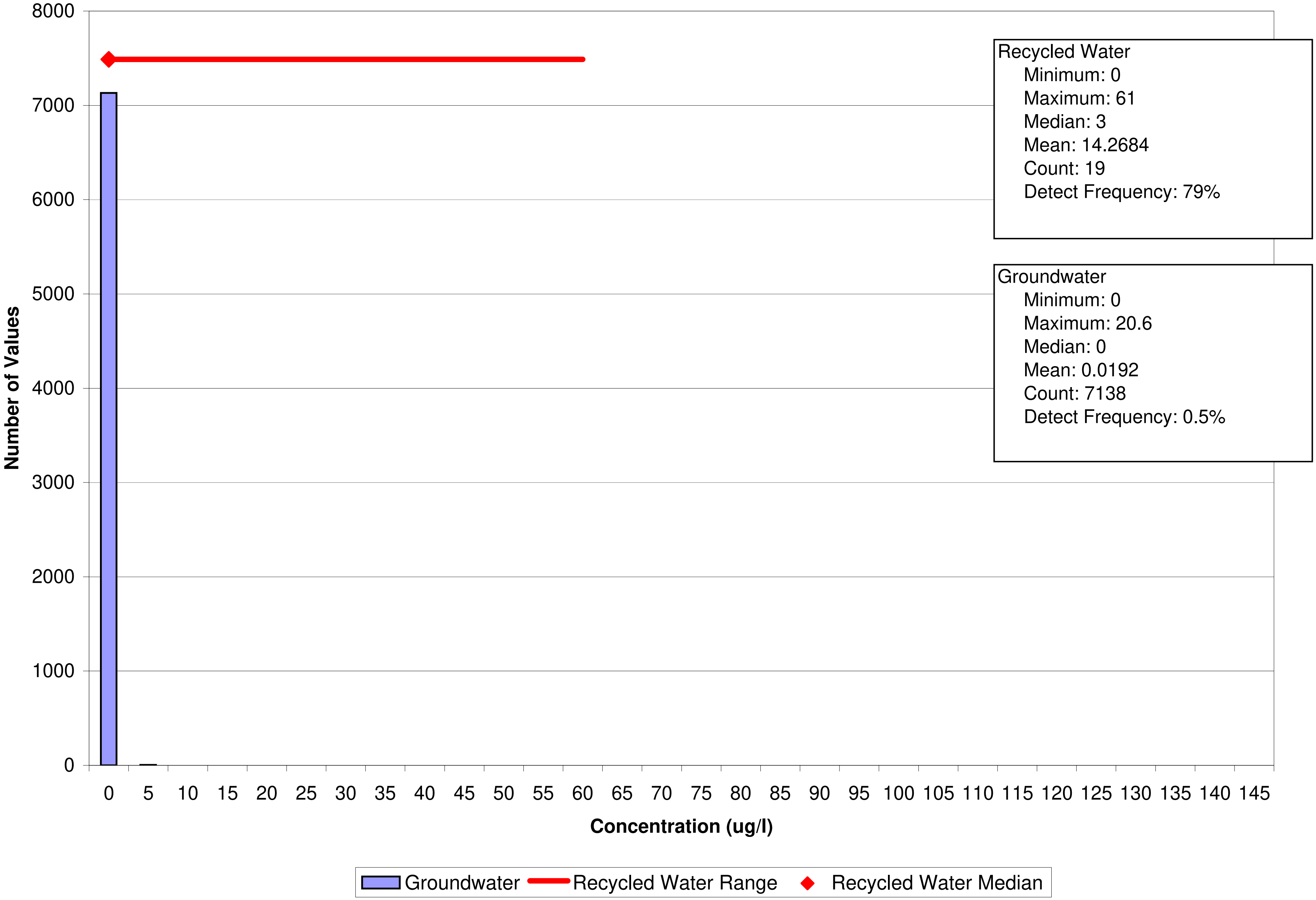
Groundwater
Minimum: 0
Maximum: 1600
Median: 227
Mean: 258
Count: 1802
Detect Frequency: 100%


Boron
Number of Values
700
600
500
400
300
200
100
0
0
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
1050
1100
1150
1200
1250
1300
1350
1400
≥ 1450
Concentration (ug/l)
Recycled Water
Minimum: 207
Maximum: 505
Median: 416
Mean: 398
Count: 19
Detect Frequency: 100%
Groundwater
Minimum: 0
Maximum: 5200
Median: 134
Mean: 196
Count: 1815
Detect Frequency: 85%
Groundwater
Recycled Water Range
Recycled Water Median

Bromodichloromethane



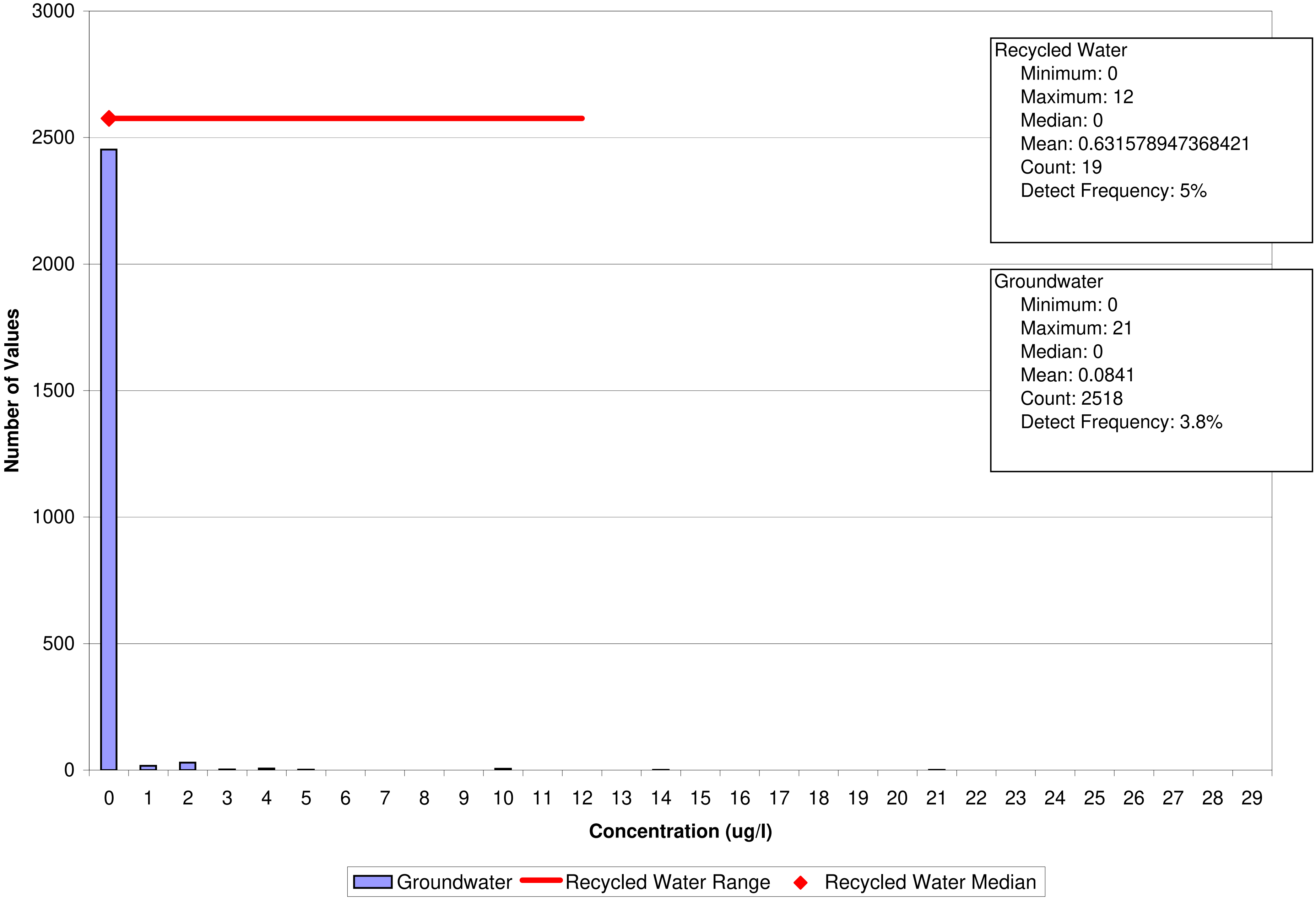
Bromoform



Recycled Water
Minimum: 0
Maximum: 61
Median: 3
Mean: 14.2684
Count: 19
Detect Frequency: 79%

Groundwater
Minimum: 0
Maximum: 20.6
Median: 0
Mean: 0.0192
Count: 7138
Detect Frequency: 0.5%

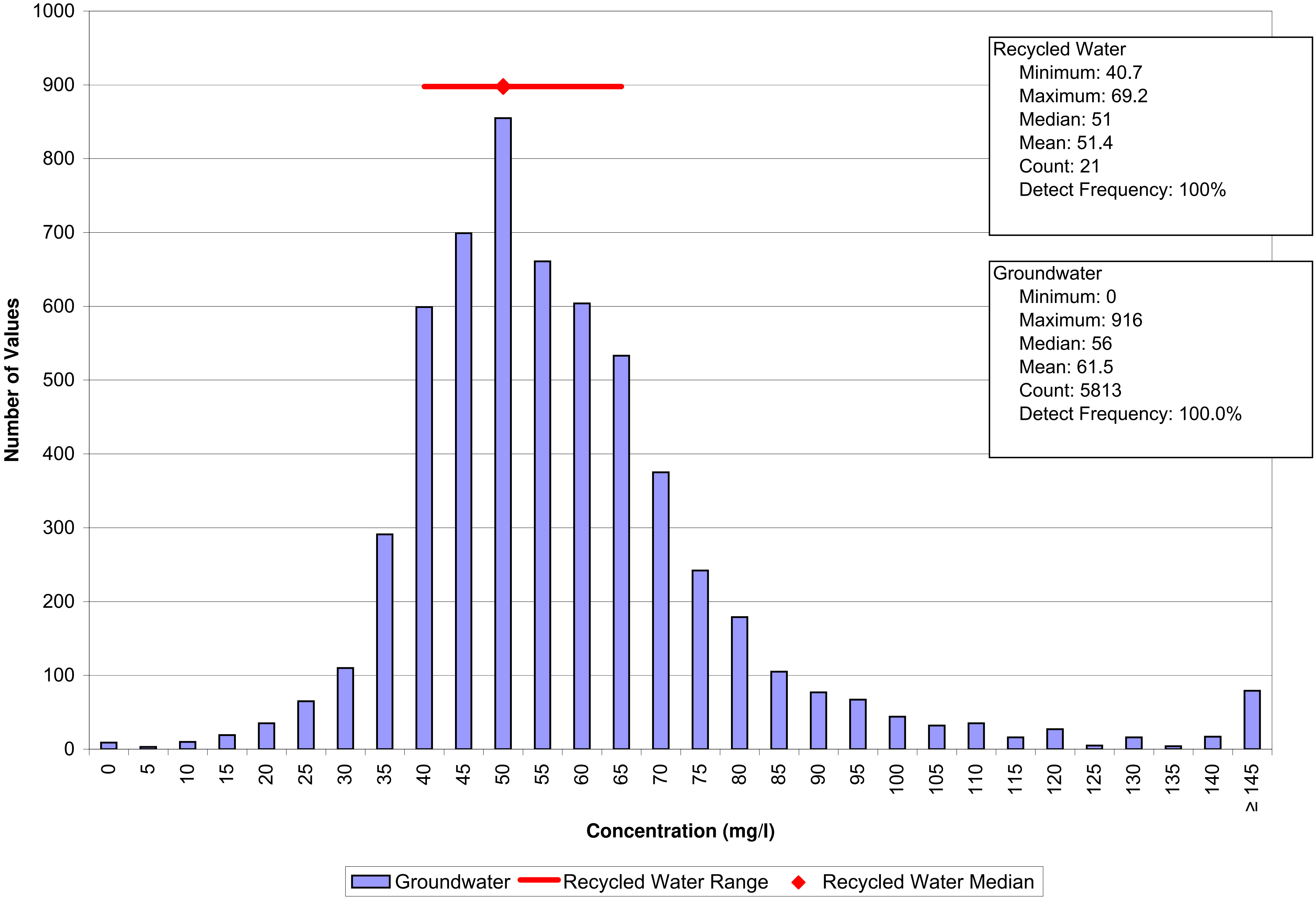
Cadmium



Recycled Water
Minimum: 0
Maximum: 12
Median: 0
Mean: 0.631578947368421
Count: 19
Detect Frequency: 5%

Groundwater
Minimum: 0
Maximum: 21
Median: 0
Mean: 0.0841
Count: 2518
Detect Frequency: 3.8%

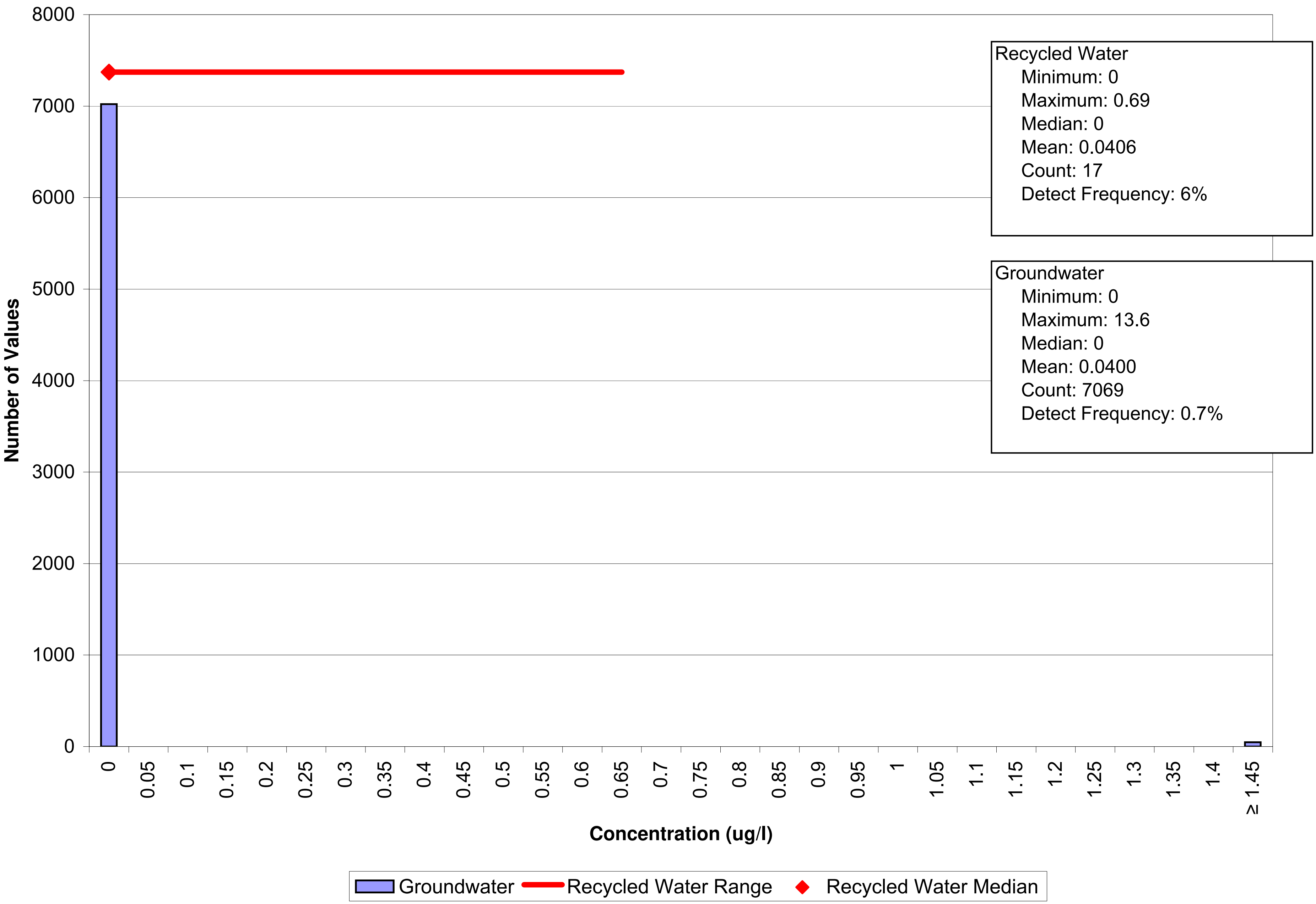
Calcium



Recycled Water
Minimum: 40.7
Maximum: 69.2
Median: 51
Mean: 51.4
Count: 21
Detect Frequency: 100%

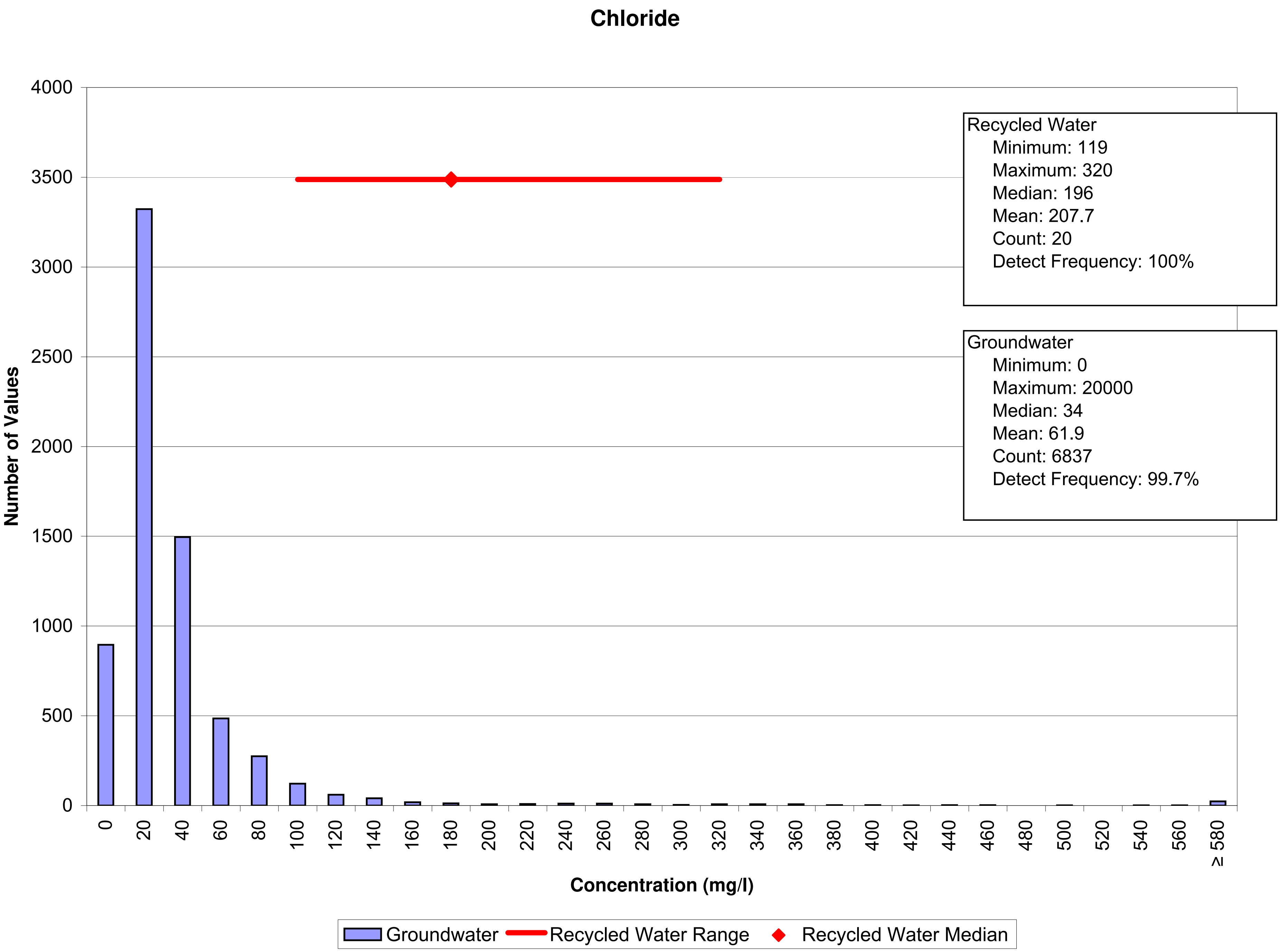
Groundwater
Minimum: 0
Maximum: 916
Median: 56
Mean: 61.5
Count: 5813
Detect Frequency: 100.0%

Carbon Tetrachloride



Recycled Water
Minimum: 0
Maximum: 0.69
Median: 0
Mean: 0.0406
Count: 17
Detect Frequency: 6%

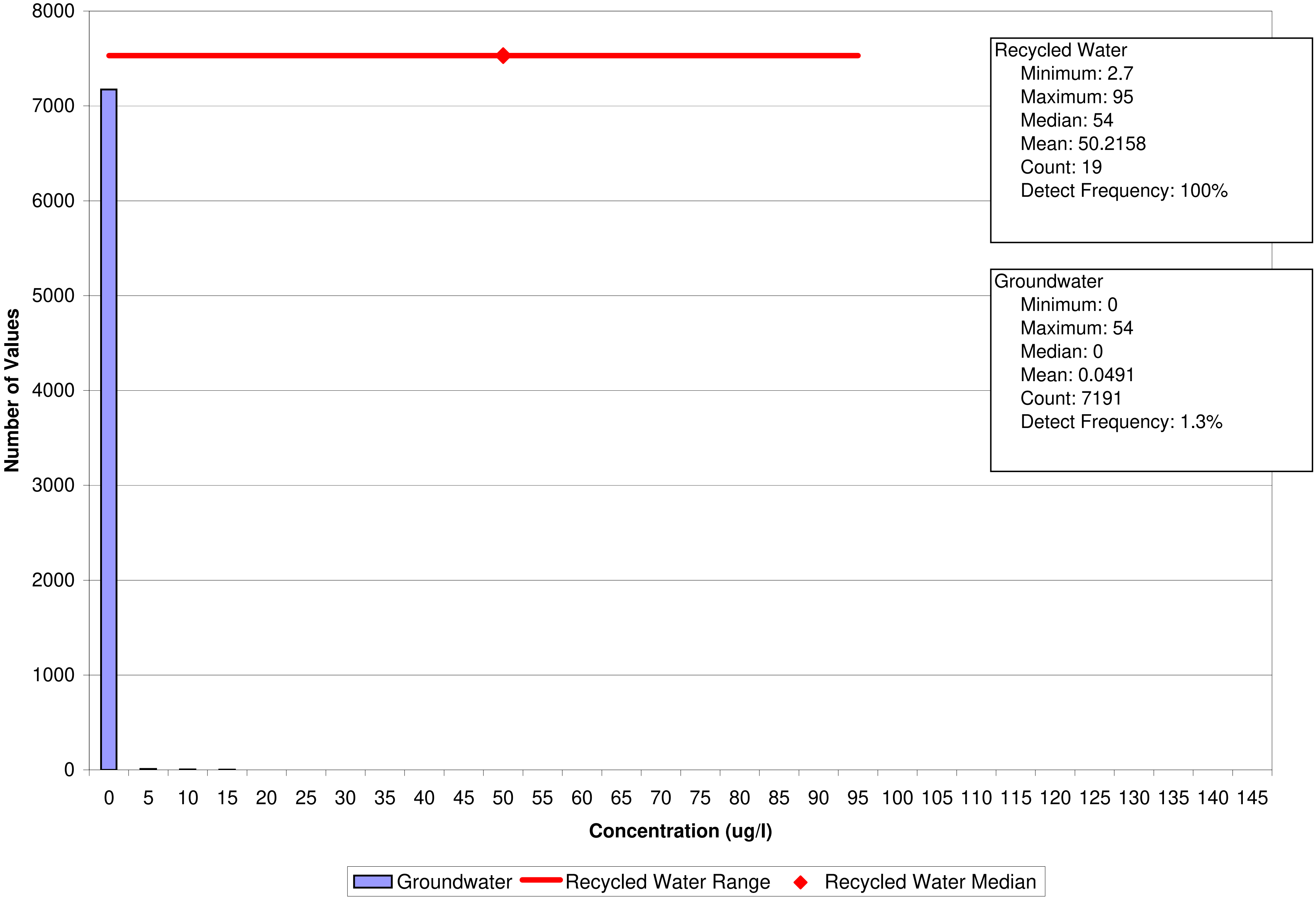
Groundwater
Minimum: 0
Maximum: 13.6
Median: 0
Mean: 0.0400
Count: 7069
Detect Frequency: 0.7%



Recycled Water
Minimum: 119
Maximum: 320
Median: 196
Mean: 207.7
Count: 20
Detect Frequency: 100%

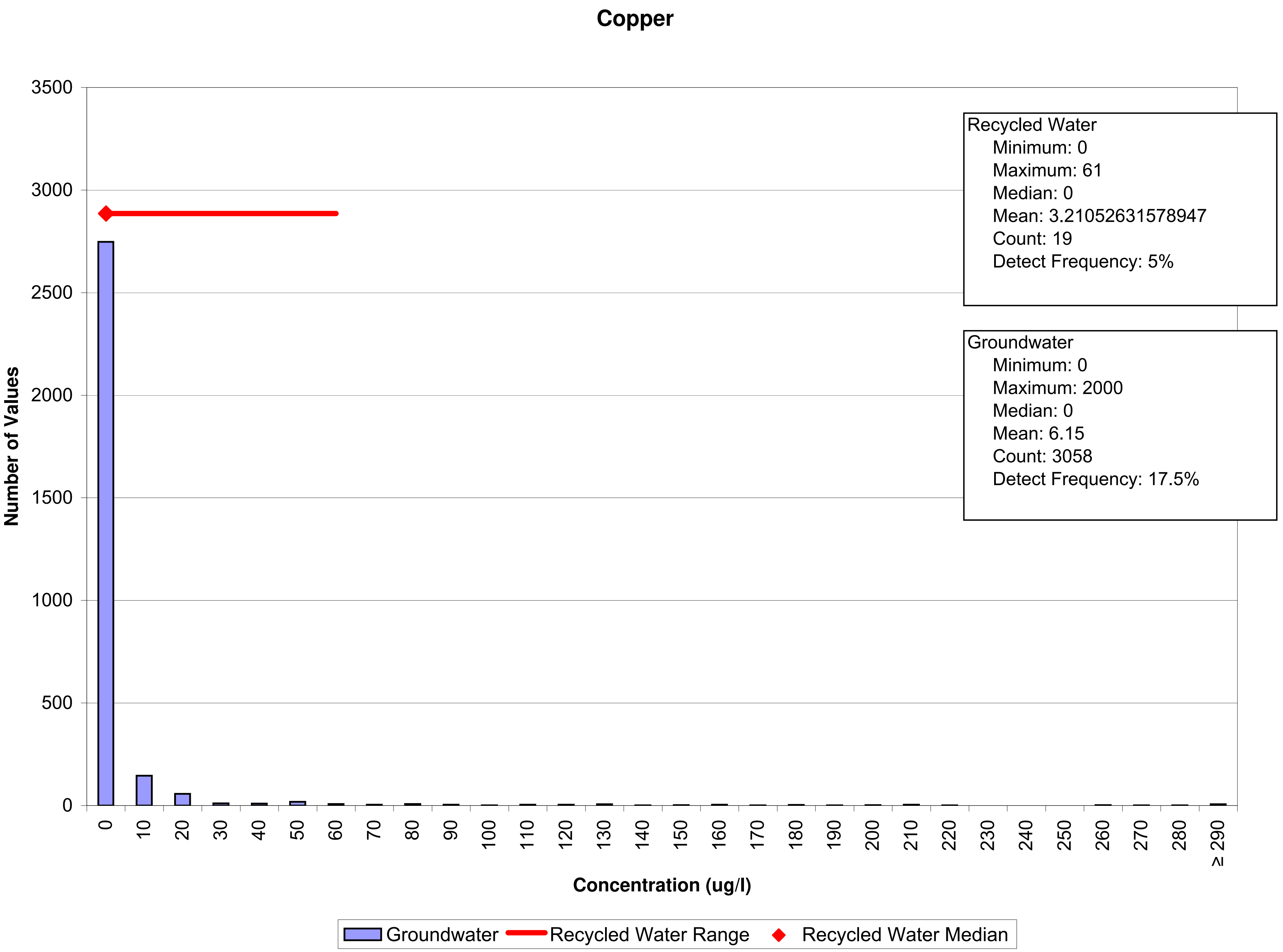
Groundwater
Minimum: 0
Maximum: 20000
Median: 34
Mean: 61.9
Count: 6837
Detect Frequency: 99.7%

Chloroform

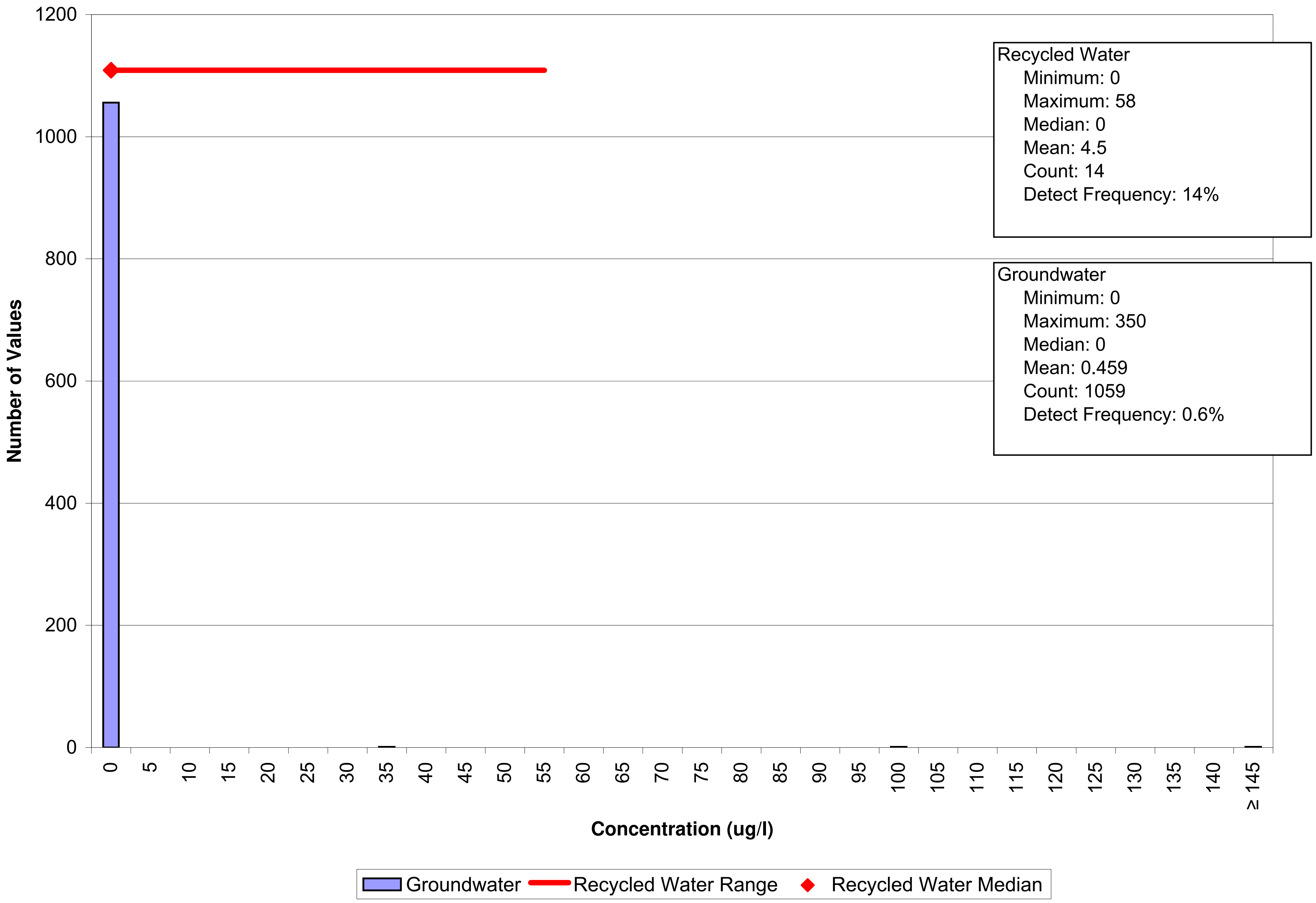


Recycled Water
Minimum: 2.7
Maximum: 95
Median: 54
Mean: 50.2158
Count: 19
Detect Frequency: 100%

Groundwater
Minimum: 0
Maximum: 54
Median: 0
Mean: 0.0491
Count: 7191
Detect Frequency: 1.3%

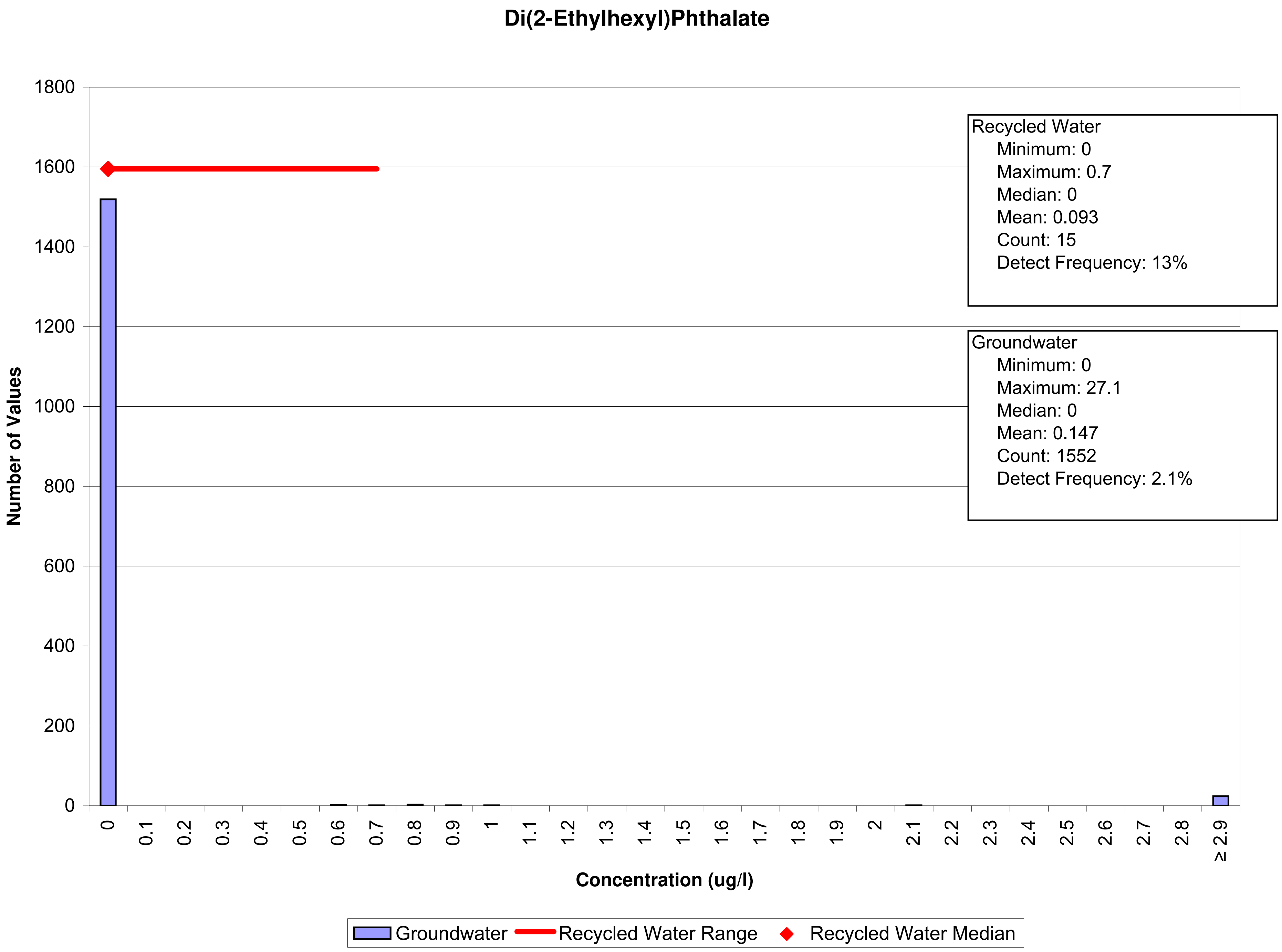

Copper
Number of Values
3500
3000
2500
2000
1500
1000
500
0
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
230
240
250
260
270
280
≥ 290
Concentration (ug/l)
Recycled Water
Minimum: 0
Maximum: 61
Median: 0
Mean: 3.21052631578947
Count: 19
Detect Frequency: 5%
Groundwater
Minimum: 0
Maximum: 2000
Median: 0
Mean: 6.15
Count: 3058
Detect Frequency: 17.5%
Groundwater
Recycled Water Range
Recycled Water Median

Cyanide

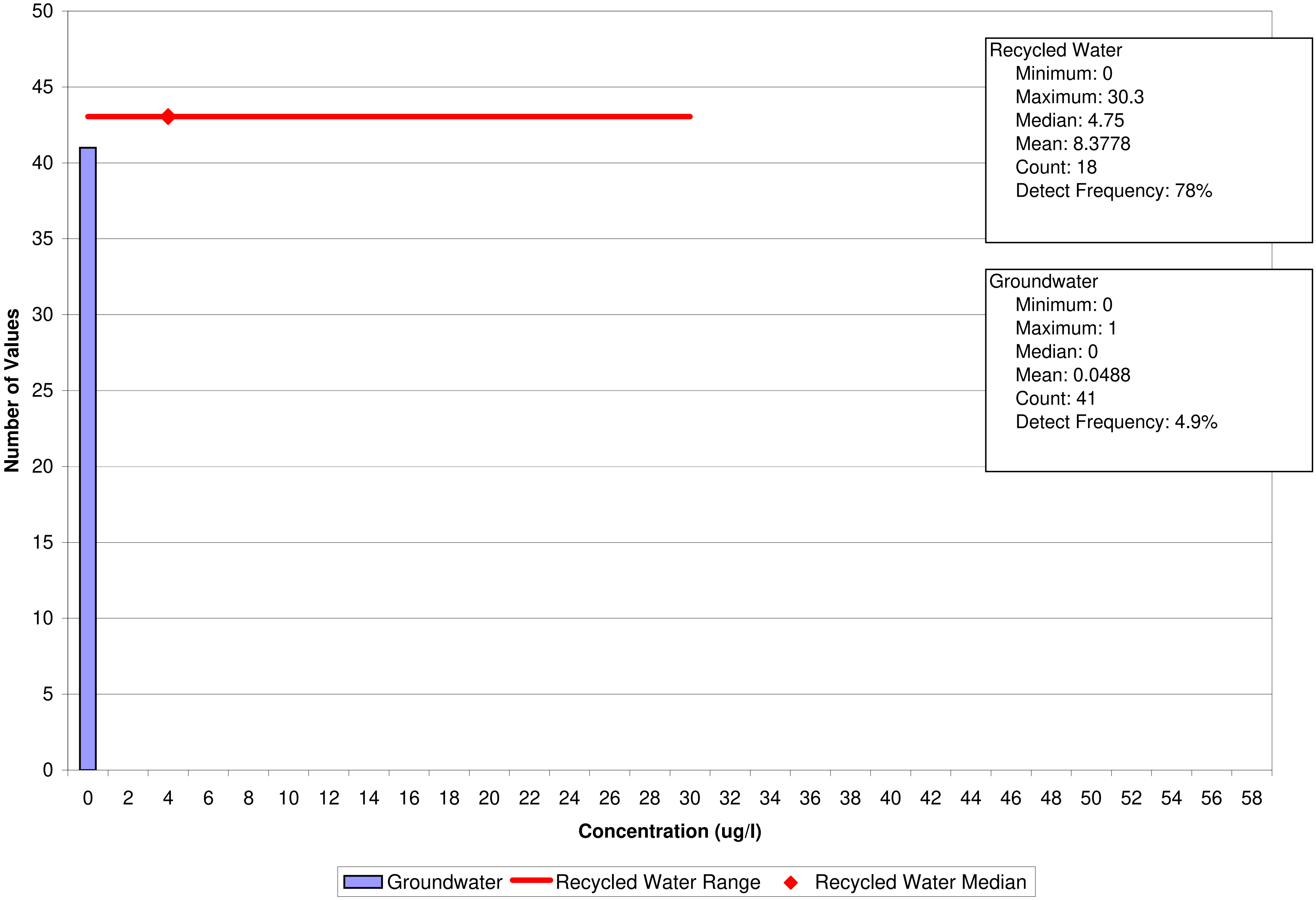


Recycled Water
Minimum: 0
Maximum: 58
Median: 0
Mean: 4.5
Count: 14
Detect Frequency: 14%

Groundwater
Minimum: 0
Maximum: 350
Median: 0
Mean: 0.459
Count: 1059
Detect Frequency: 0.6%


Di(2-Ethylhexyl)Phthalate
Number of Values
1800
1600
1400
1200
1000
800
600
400
200
0
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
≥ 2.9
Concentration (ug/l)
Recycled Water
Minimum: 0
Maximum: 0.7
Median: 0
Mean: 0.093
Count: 15
Detect Frequency: 13%
Groundwater
Minimum: 0
Maximum: 27.1
Median: 0
Mean: 0.147
Count: 1552
Detect Frequency: 2.1%
Groundwater
Recycled Water Range
Recycled Water Median

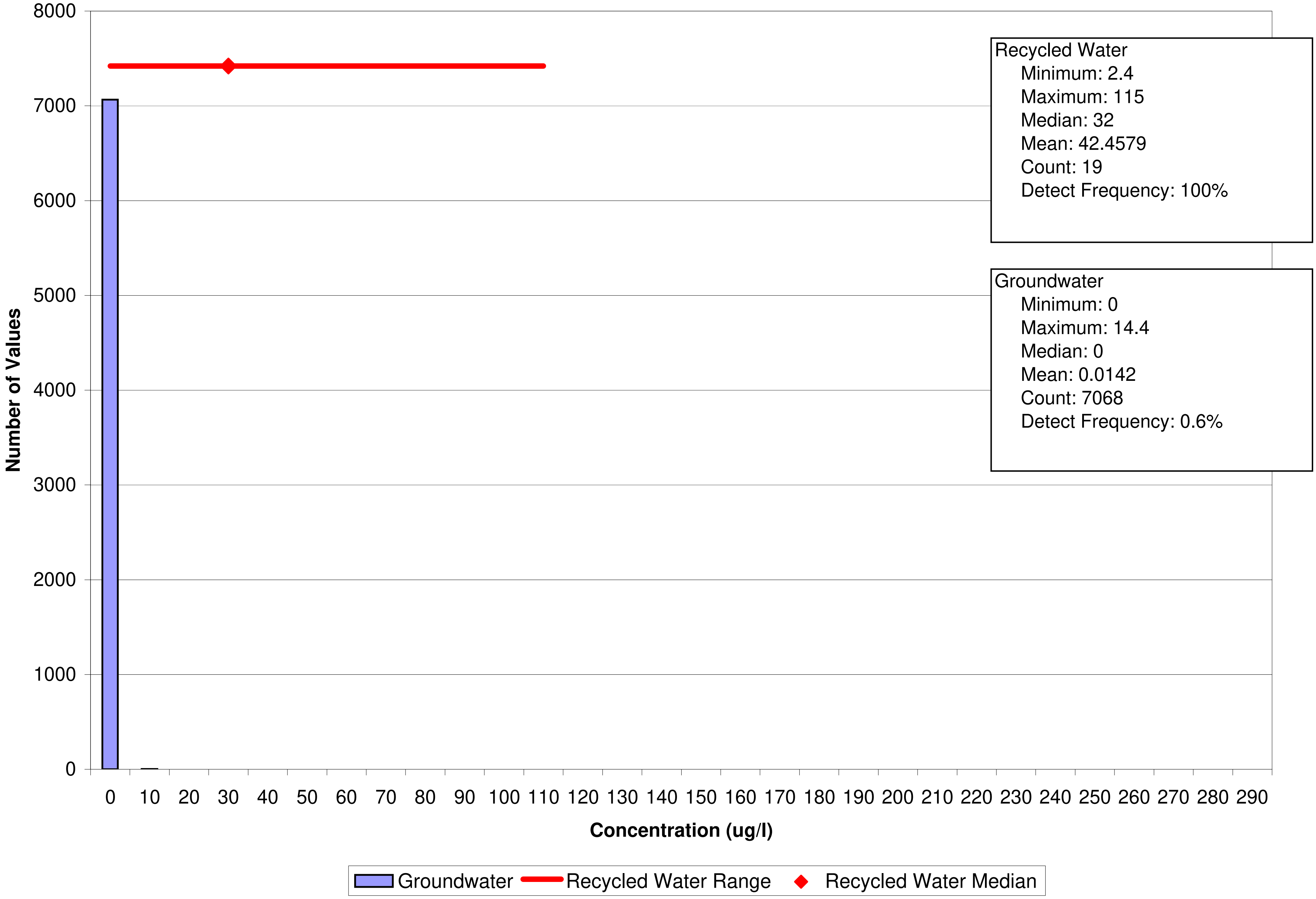
Dibromoacetic Acid



Recycled Water
Minimum: 0
Maximum: 30.3
Median: 4.75
Mean: 8.3778
Count: 18
Detect Frequency: 78%

Groundwater
Minimum: 0
Maximum: 1
Median: 0
Mean: 0.0488
Count: 41
Detect Frequency: 4.9%

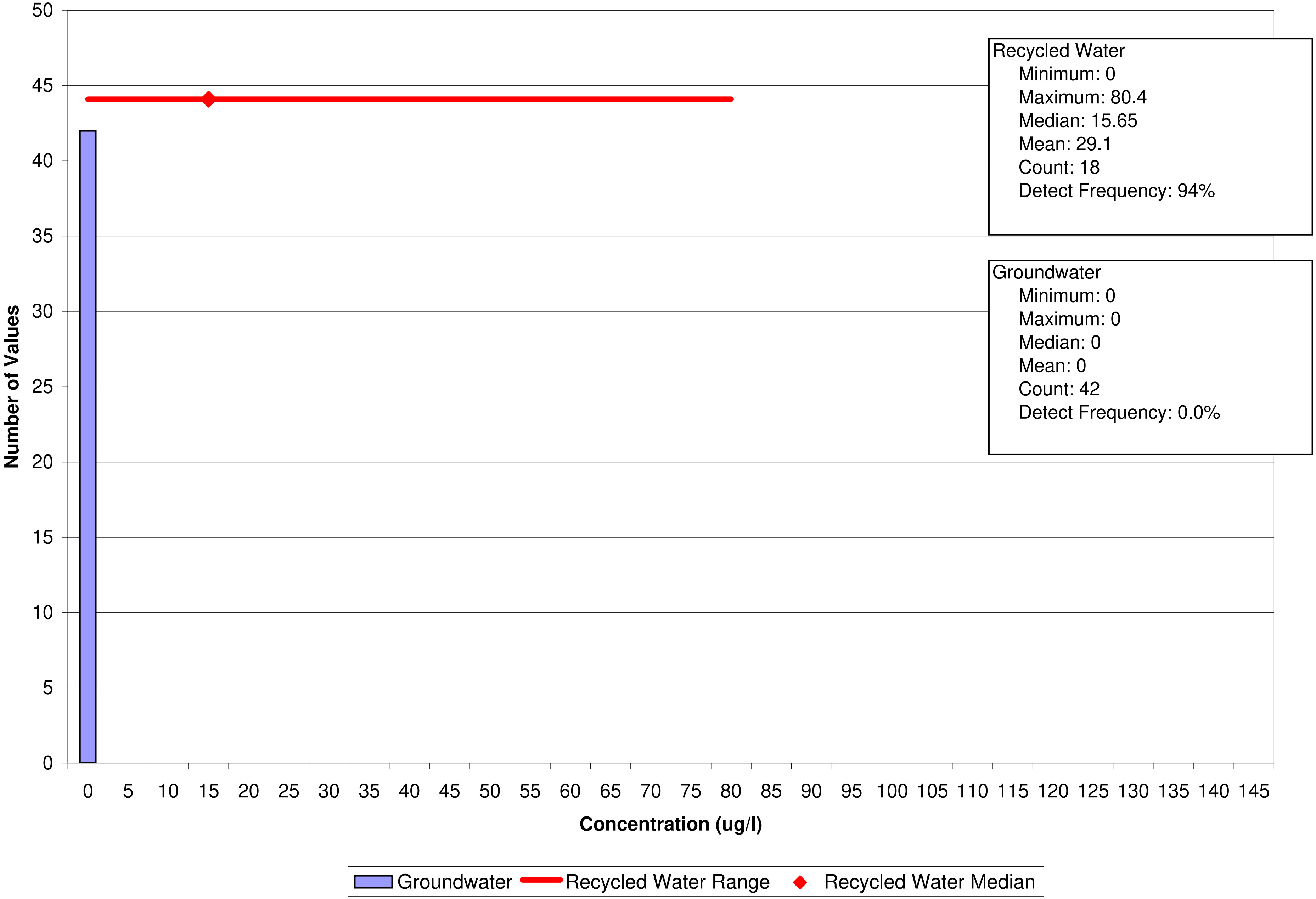
Dibromochloromethane

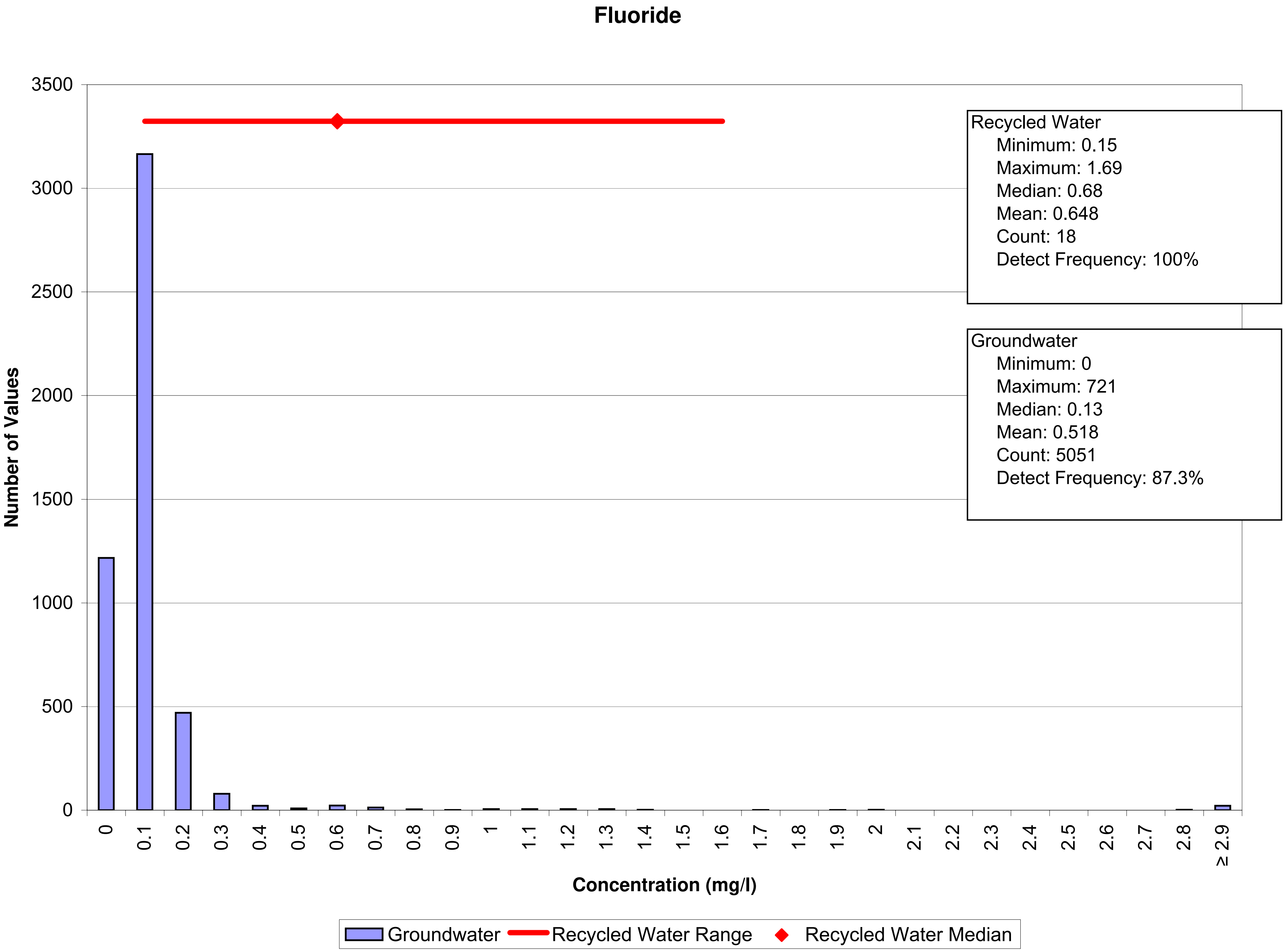


Recycled Water
Minimum: 2.4
Maximum: 115
Median: 32
Mean: 42.4579
Count: 19
Detect Frequency: 100%

Groundwater
Minimum: 0
Maximum: 14.4
Median: 0
Mean: 0.0142
Count: 7068
Detect Frequency: 0.6%

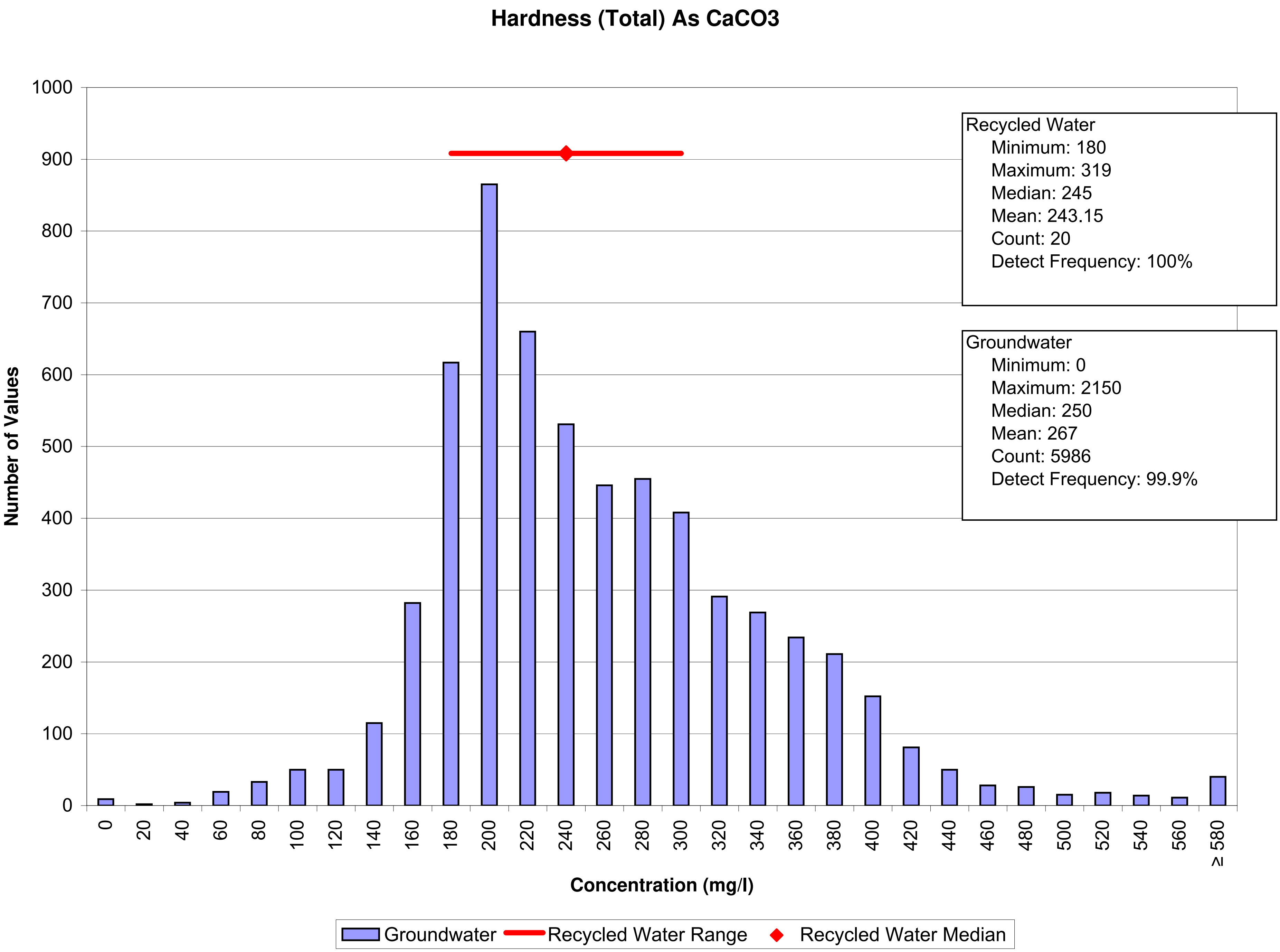
Dichloroacetic Acid





Recycled Water
- Minimum: 0.15
- Maximum: 1.69
- Median: 0.68
- Mean: 0.648
- Count: 18
- Detect Frequency: 100%

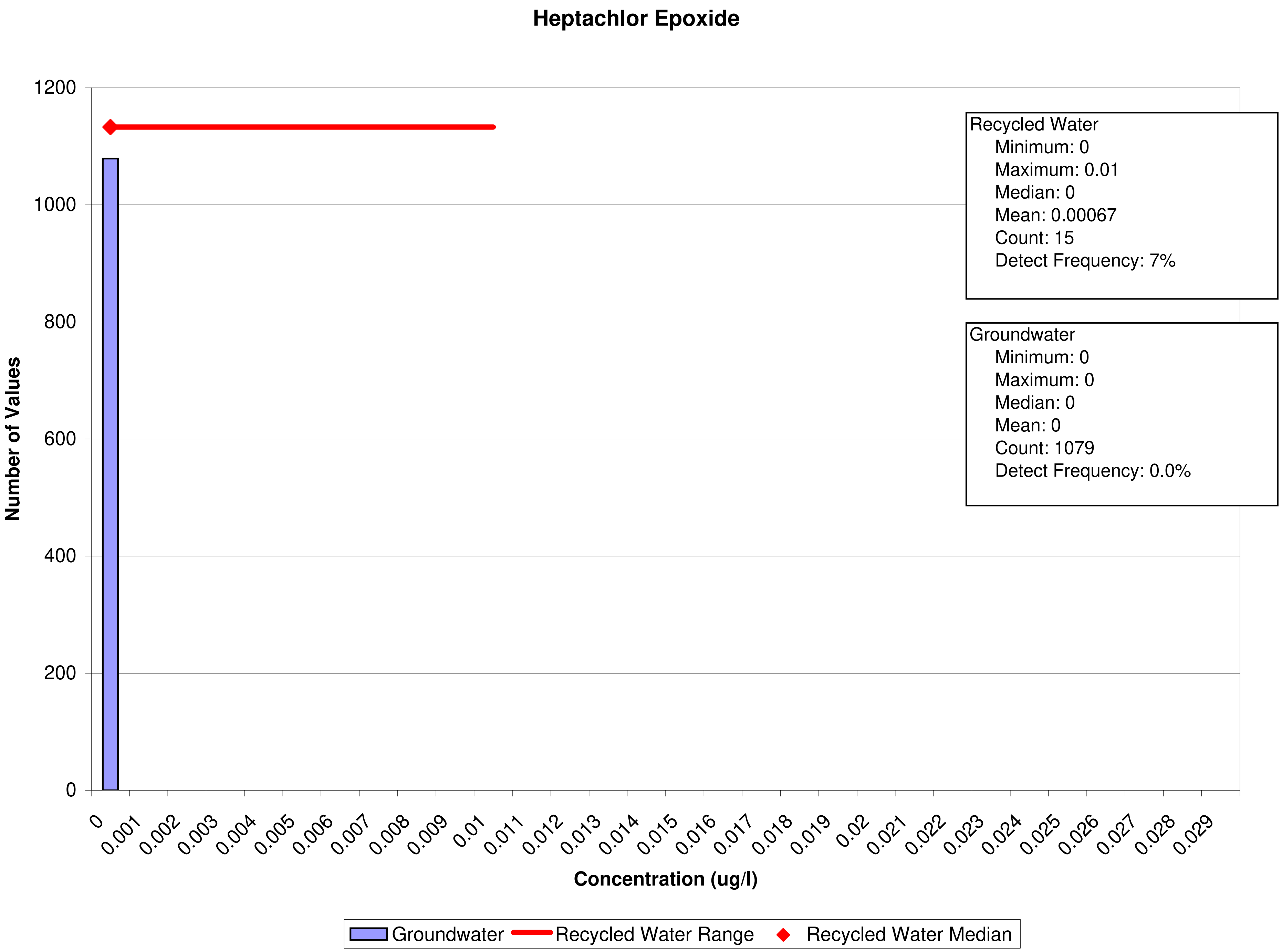
Groundwater
- Minimum: 0
- Maximum: 721
- Median: 0.13
- Mean: 0.518
- Count: 5051
- Detect Frequency: 87.3%



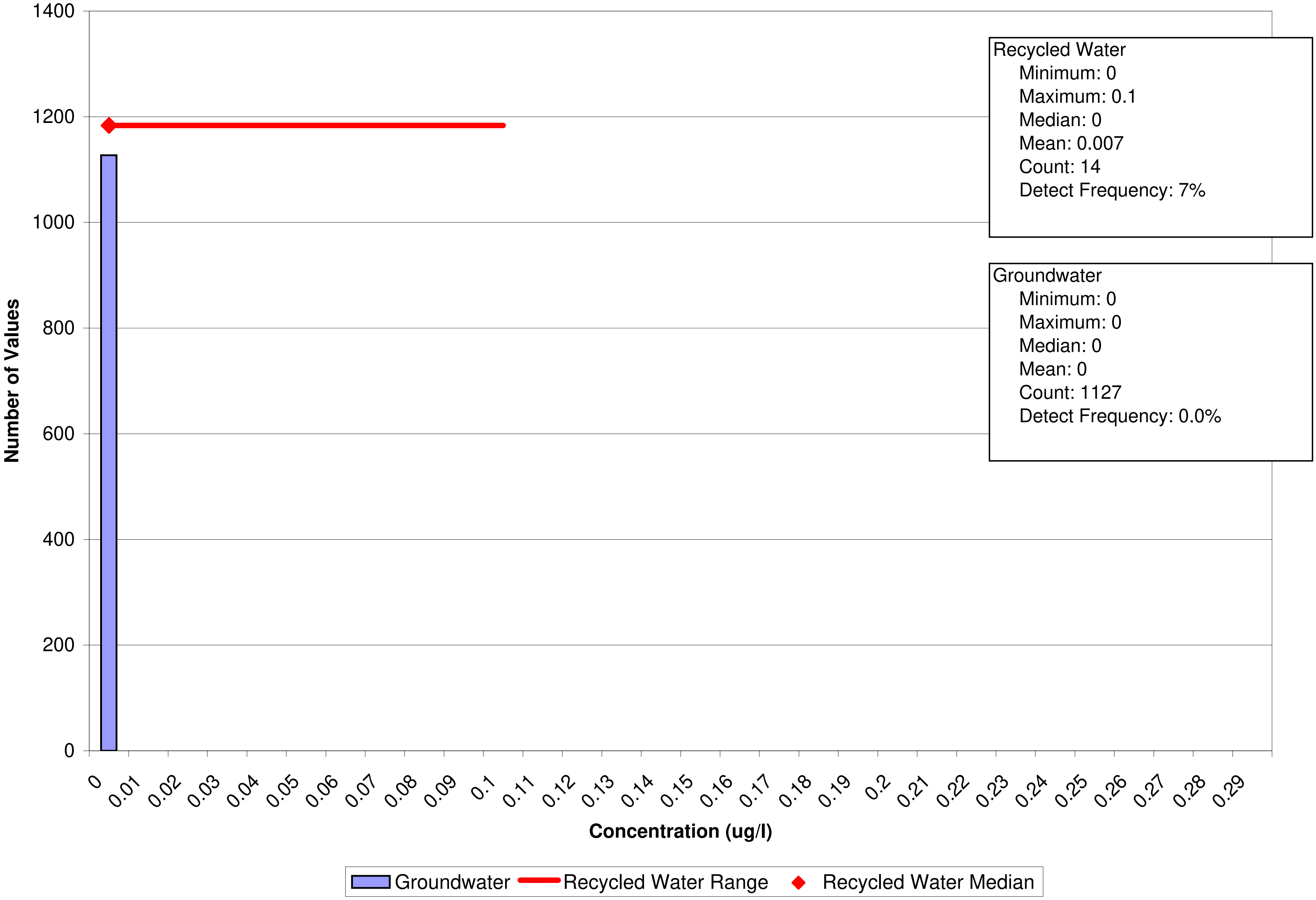
Hardness (Total) As CaCO3

Recycled Water
Minimum: 180
Maximum: 319
Median: 245
Mean: 243.15
Count: 20
Detect Frequency: 100%

Groundwater
Minimum: 0
Maximum: 2150
Median: 250
Mean: 267
Count: 5986
Detect Frequency: 99.9%

Heptachlor Epoxide
Number of Values
1200
1000
800
600
400
200
0
0
0.001
0.002
0.003
0.004
0.005
0.006
0.007
0.008
0.009
0.01
0.011
0.012
0.013
0.014
0.015
0.016
0.017
0.018
0.019
0.02
0.021
0.022
0.023
0.024
0.025
0.026
0.027
0.028
0.029
Concentration (ug/l)
Recycled Water
Minimum: 0
Maximum: 0.01
Median: 0
Mean: 0.00067
Count: 15
Detect Frequency: 7%
Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 1079
Detect Frequency: 0.0%
Groundwater
Recycled Water Range
Recycled Water Median

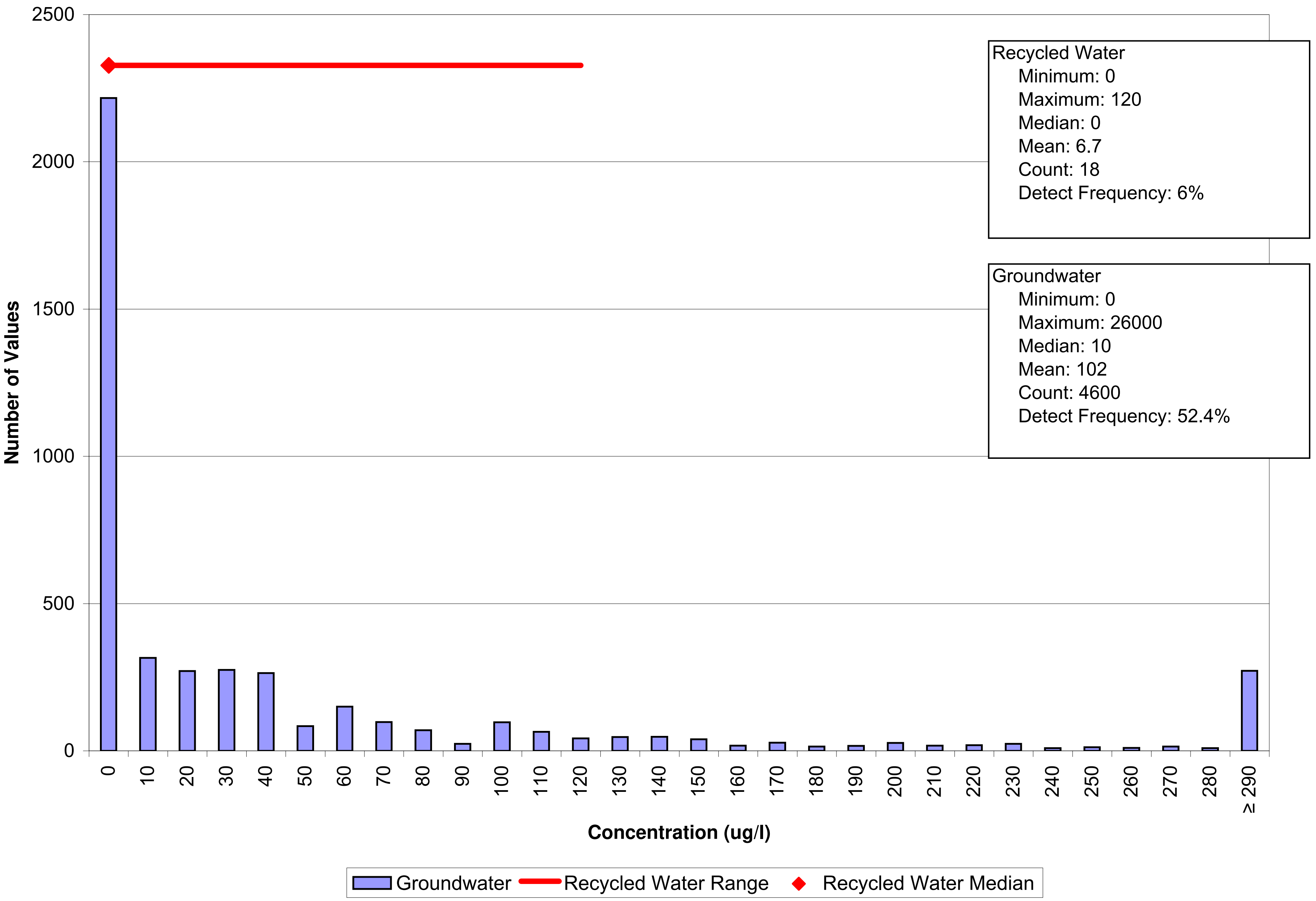
Hexachlorocyclopentadiene



Recycled Water
Minimum: 0
Maximum: 0.1
Median: 0
Mean: 0.007
Count: 14
Detect Frequency: 7%

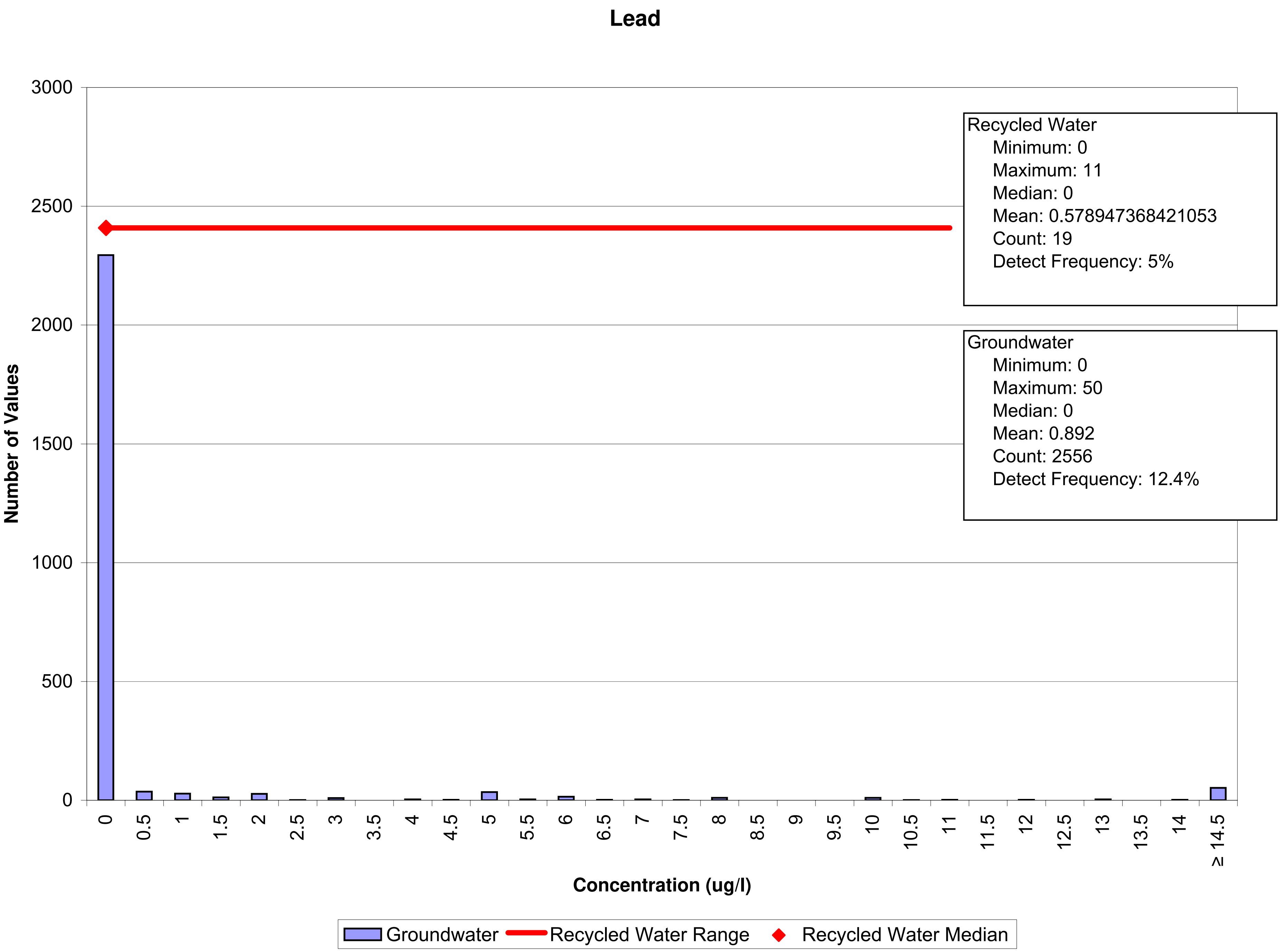
Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 1127
Detect Frequency: 0.0%

Iron



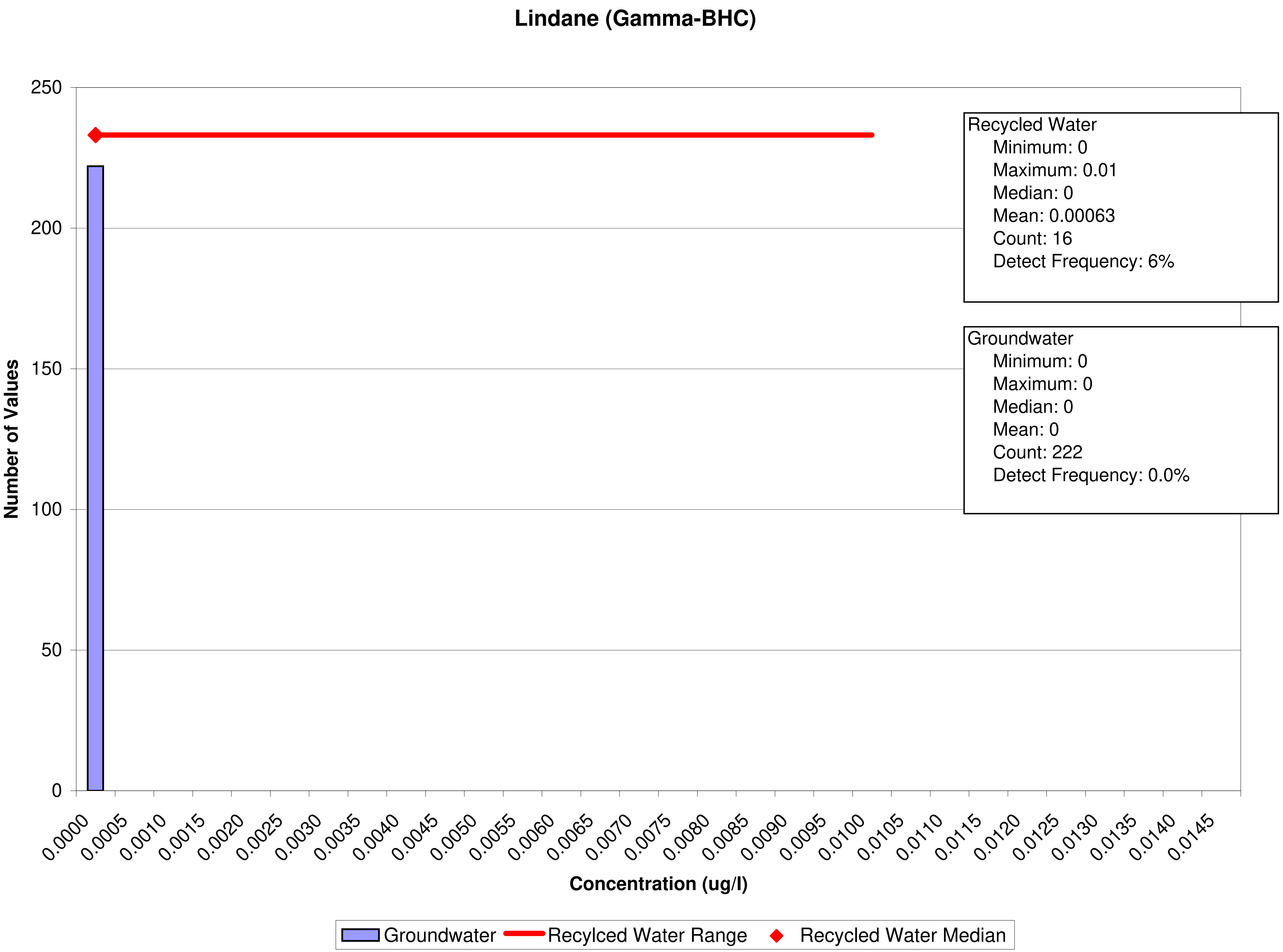
Recycled Water
Minimum: 0
Maximum: 120
Median: 0
Mean: 6.7
Count: 18
Detect Frequency: 6%

Groundwater
Minimum: 0
Maximum: 26000
Median: 10
Mean: 102
Count: 4600
Detect Frequency: 52.4%



Recycled Water
Minimum: 0
Maximum: 11
Median: 0
Mean: 0.578947368421053
Count: 19
Detect Frequency: 5%

Groundwater
Minimum: 0
Maximum: 50
Median: 0
Mean: 0.892
Count: 2556
Detect Frequency: 12.4%

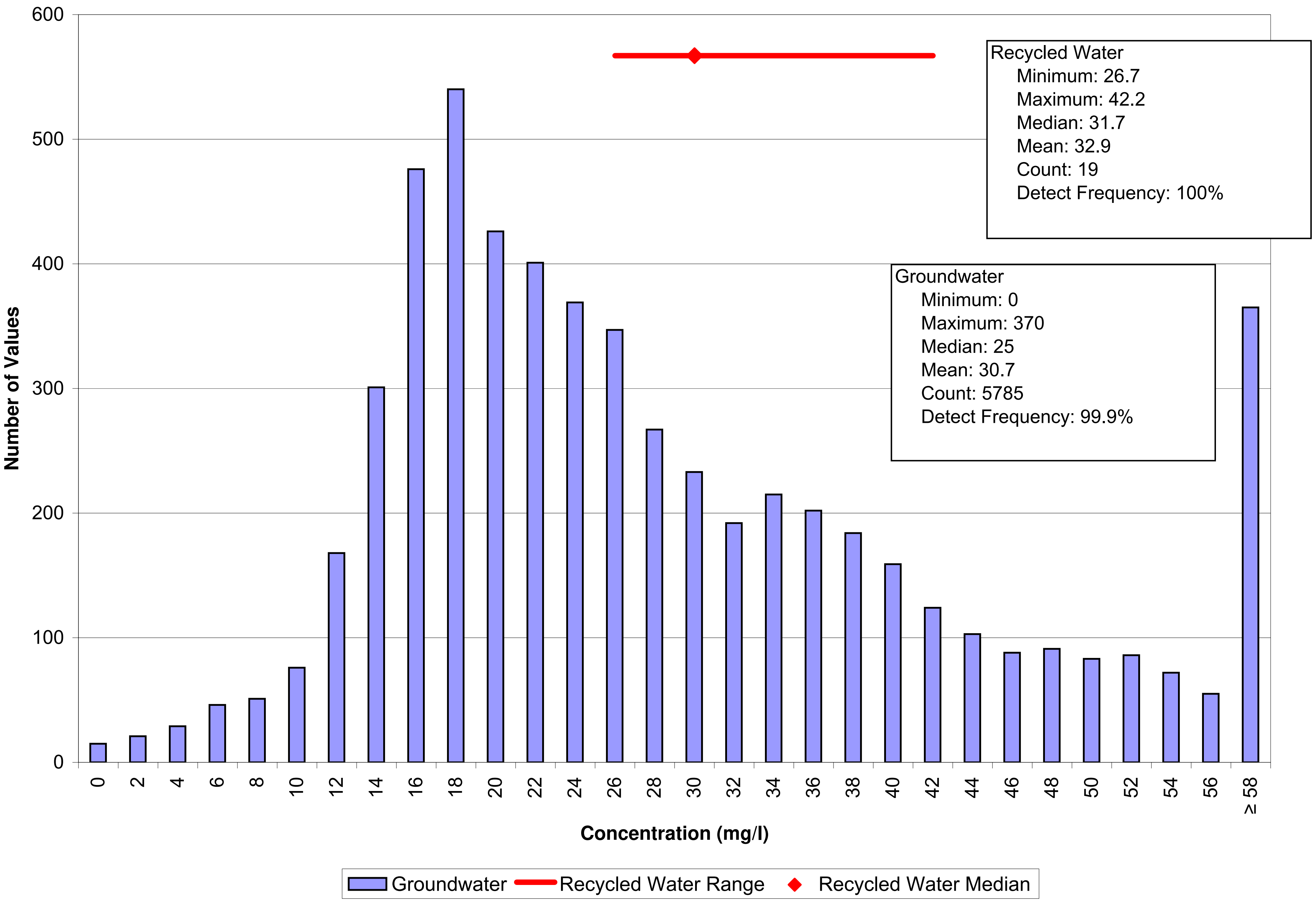


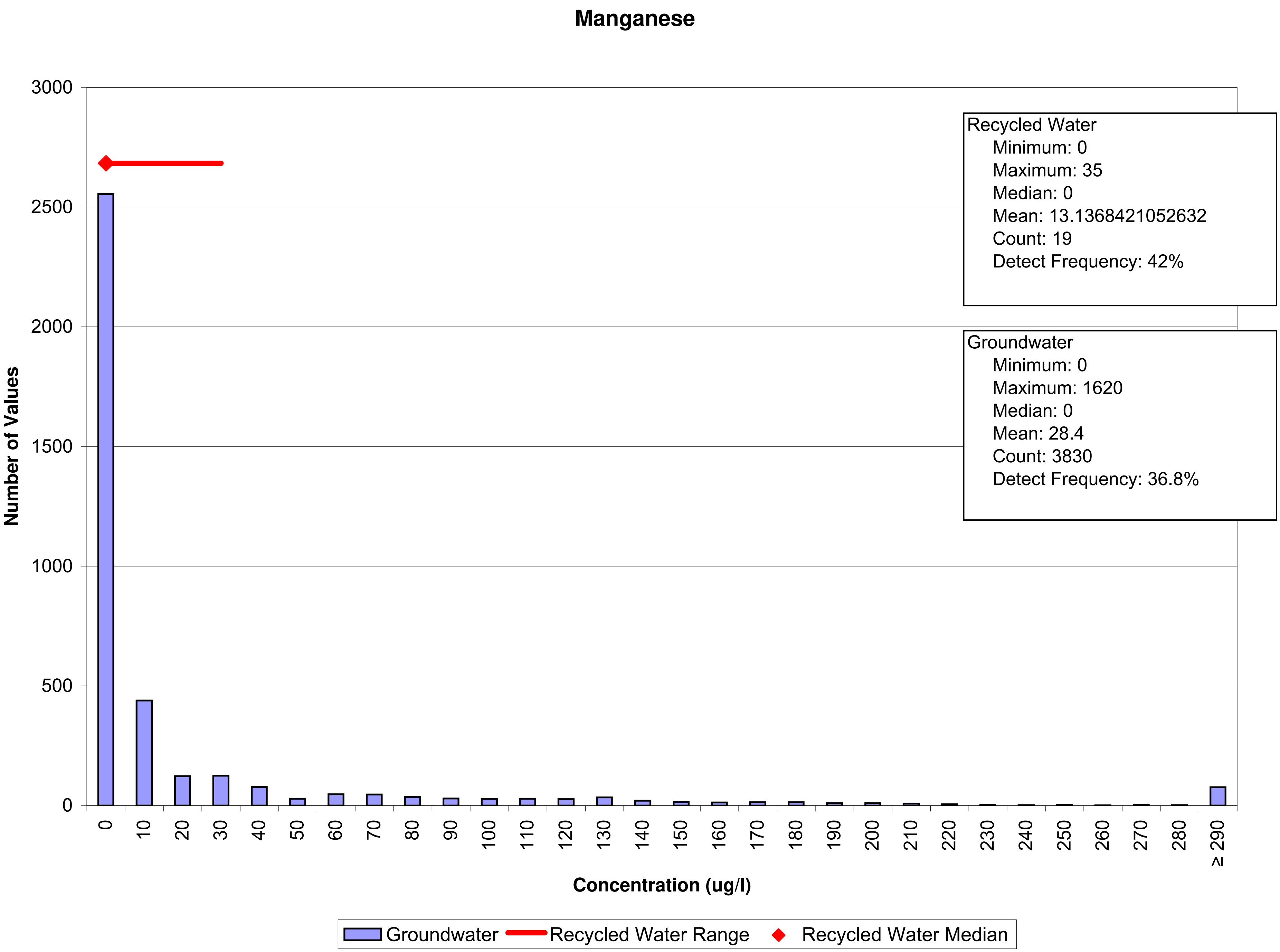
Lindane (Gamma-BHC)

Recycled Water
Minimum: 0
Maximum: 0.01
Median: 0
Mean: 0.00063
Count: 16
Detect Frequency: 6%

Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 222
Detect Frequency: 0.0%

Magnesium

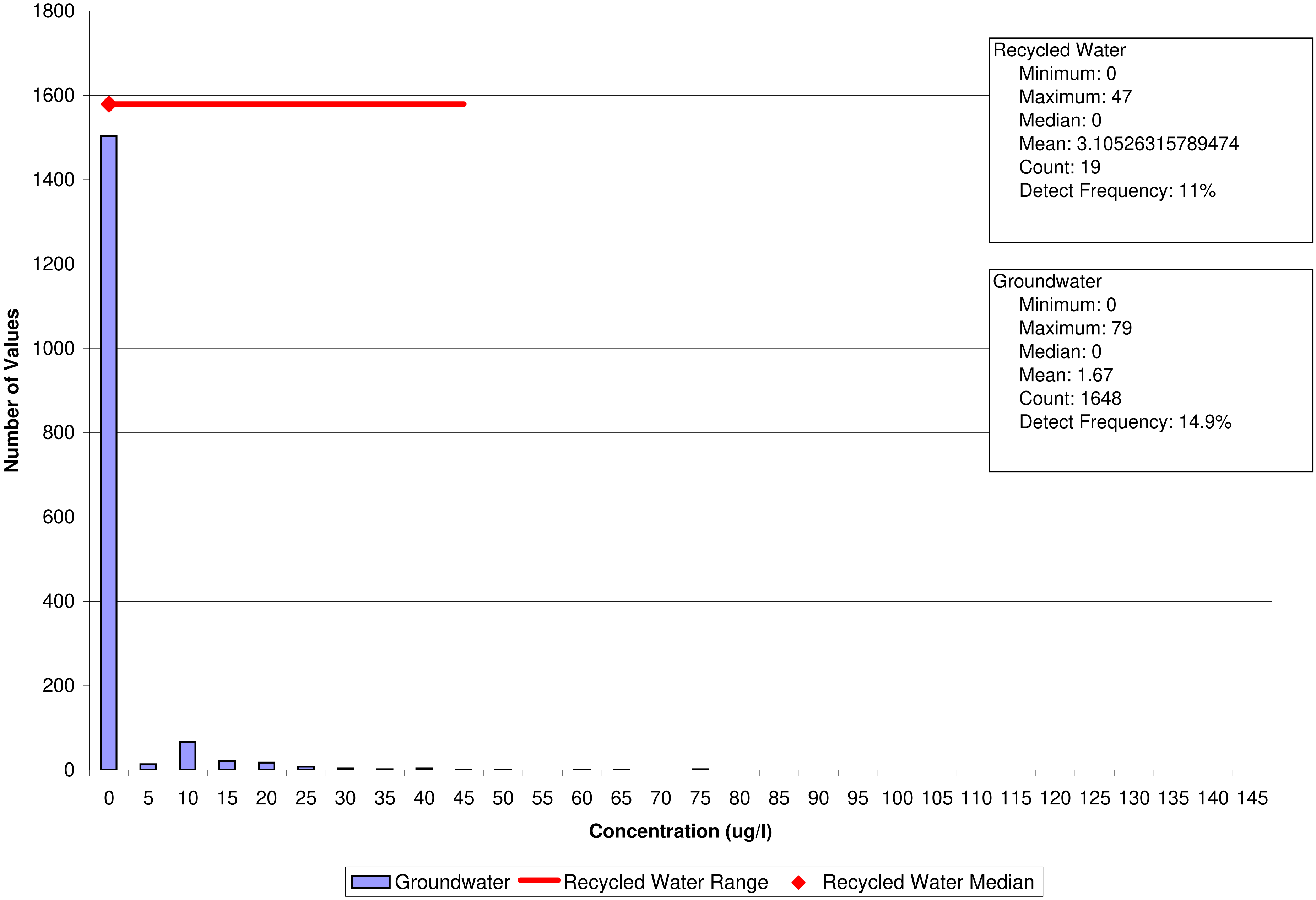

600
500
400
300
200
100
0
Number of Values
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50
52
54
56
≥ 58
Concentration (mg/l)
Recycled Water
Minimum: 26.7
Maximum: 42.2
Median: 31.7
Mean: 32.9
Count: 19
Detect Frequency: 100%
Groundwater
Minimum: 0
Maximum: 370
Median: 25
Mean: 30.7
Count: 5785
Detect Frequency: 99.9%
Groundwater
Recycled Water Range
Recycled Water Median



Recycled Water
Minimum: 0
Maximum: 35
Median: 0
Mean: 13.1368421052632
Count: 19
Detect Frequency: 42%

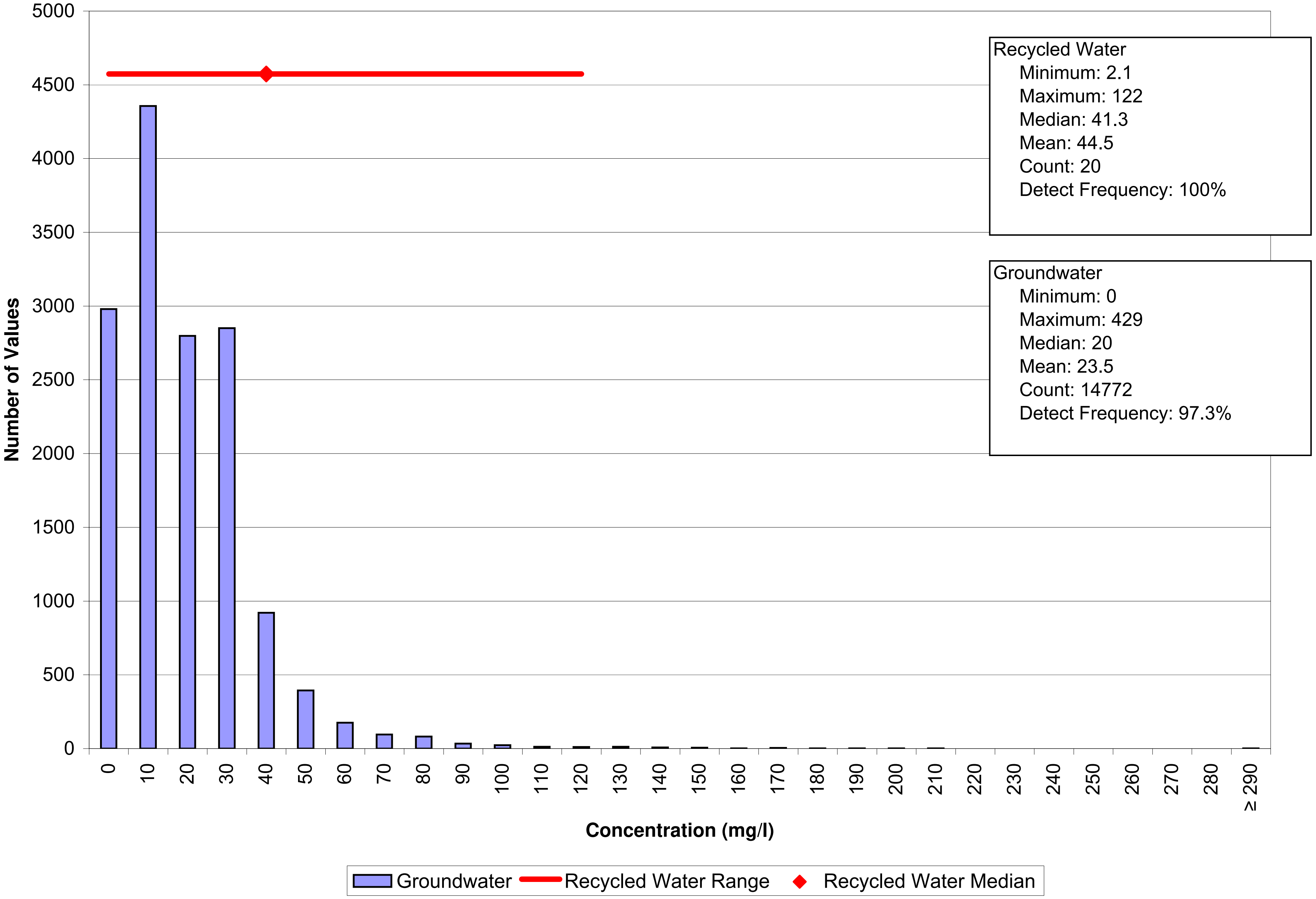
Groundwater
Minimum: 0
Maximum: 1620
Median: 0
Mean: 28.4
Count: 3830
Detect Frequency: 36.8%

Nickel


Recycled Water
Minimum: 0
Maximum: 47
Median: 0
Mean: 3.10526315789474
Count: 19
Detect Frequency: 11%

Groundwater
Minimum: 0
Maximum: 79
Median: 0
Mean: 1.67
Count: 1648
Detect Frequency: 14.9%

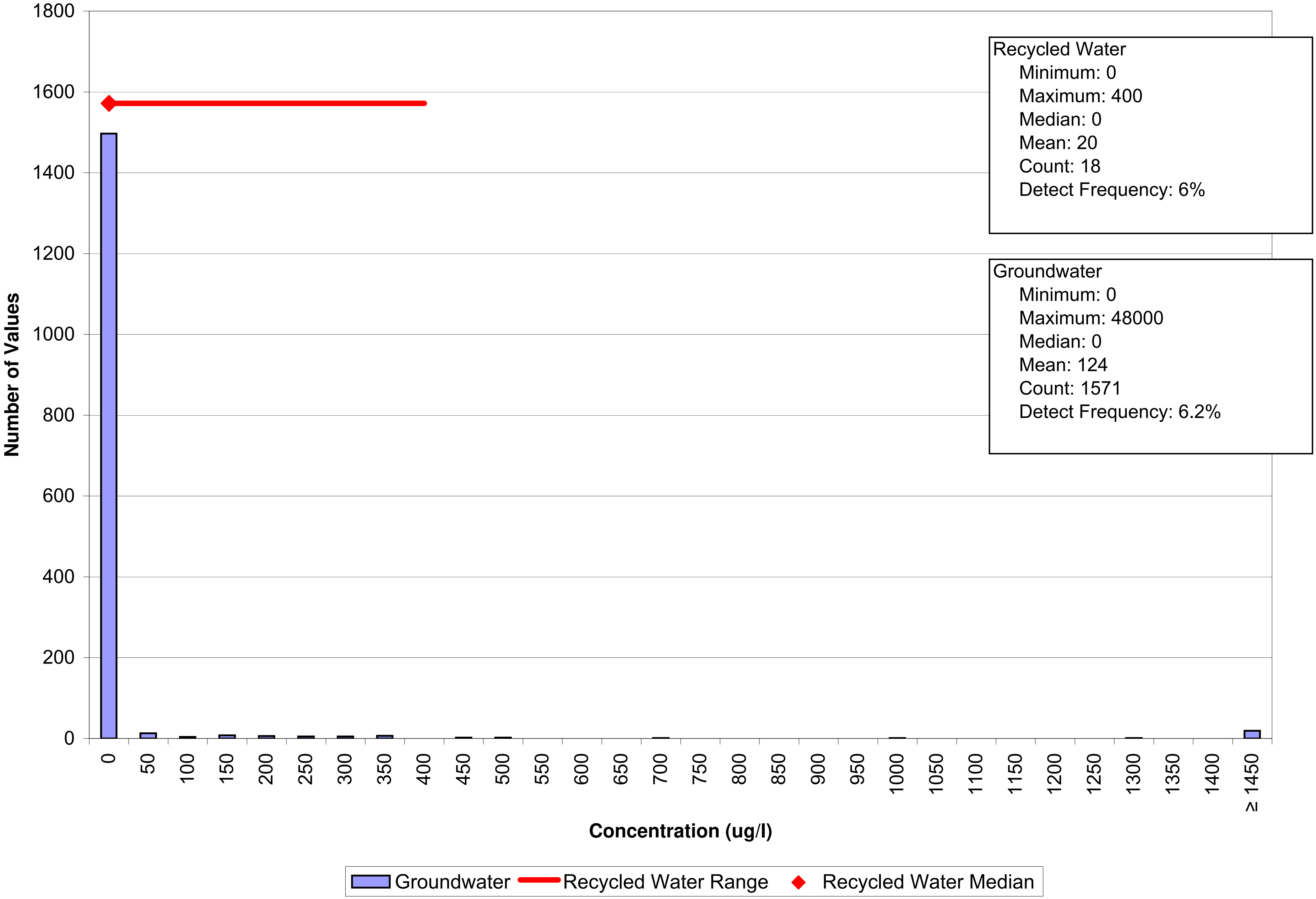
Nitrate



Recycled Water
- Minimum: 2.1
- Maximum: 122
- Median: 41.3
- Mean: 44.5
- Count: 20
- Detect Frequency: 100%

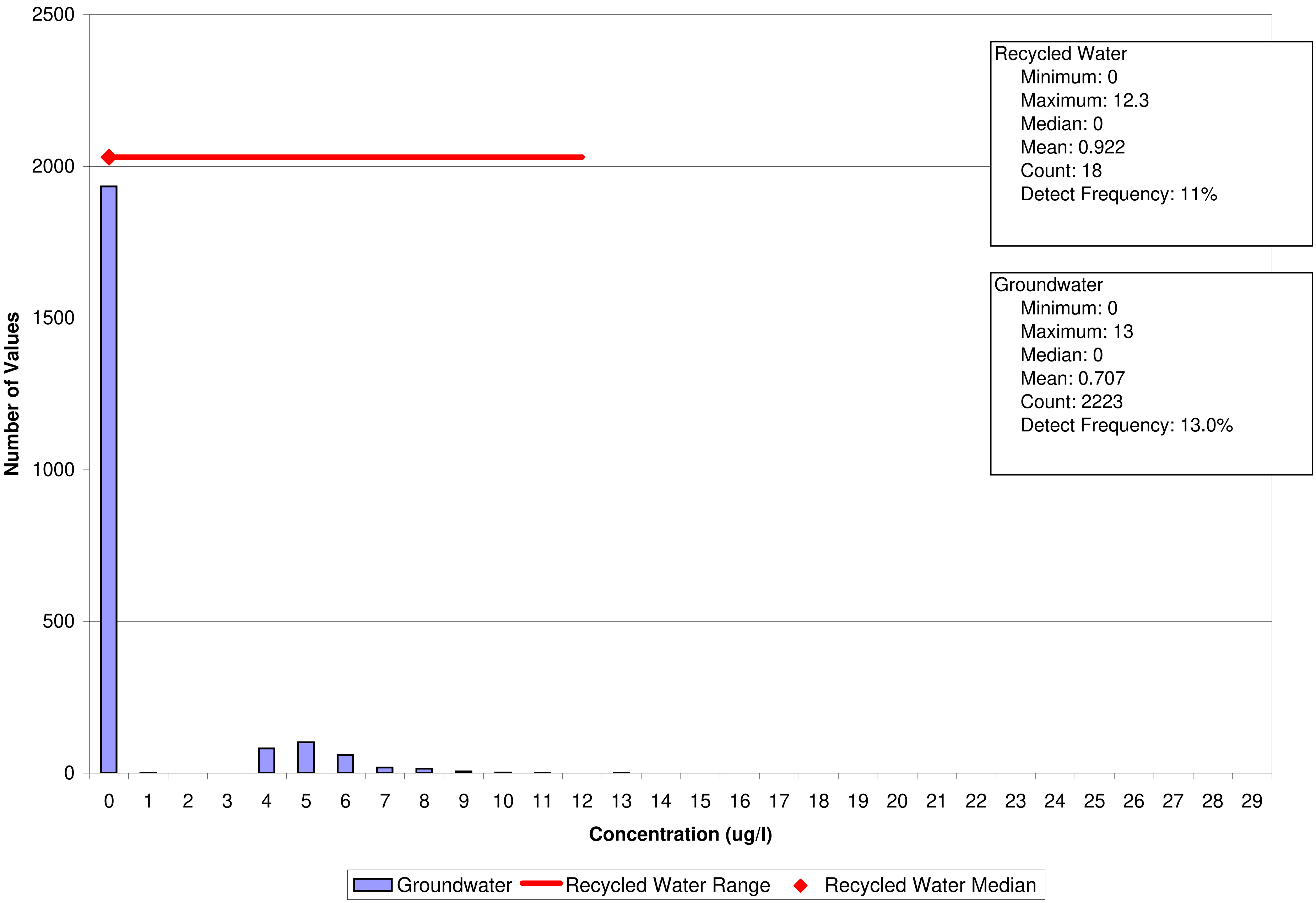
Groundwater
- Minimum: 0
- Maximum: 429
- Median: 20
- Mean: 23.5
- Count: 14772
- Detect Frequency: 97.3%

Nitrite (As N)


Recycled Water
Minimum: 0
Maximum: 400
Median: 0
Mean: 20
Count: 18
Detect Frequency: 6%

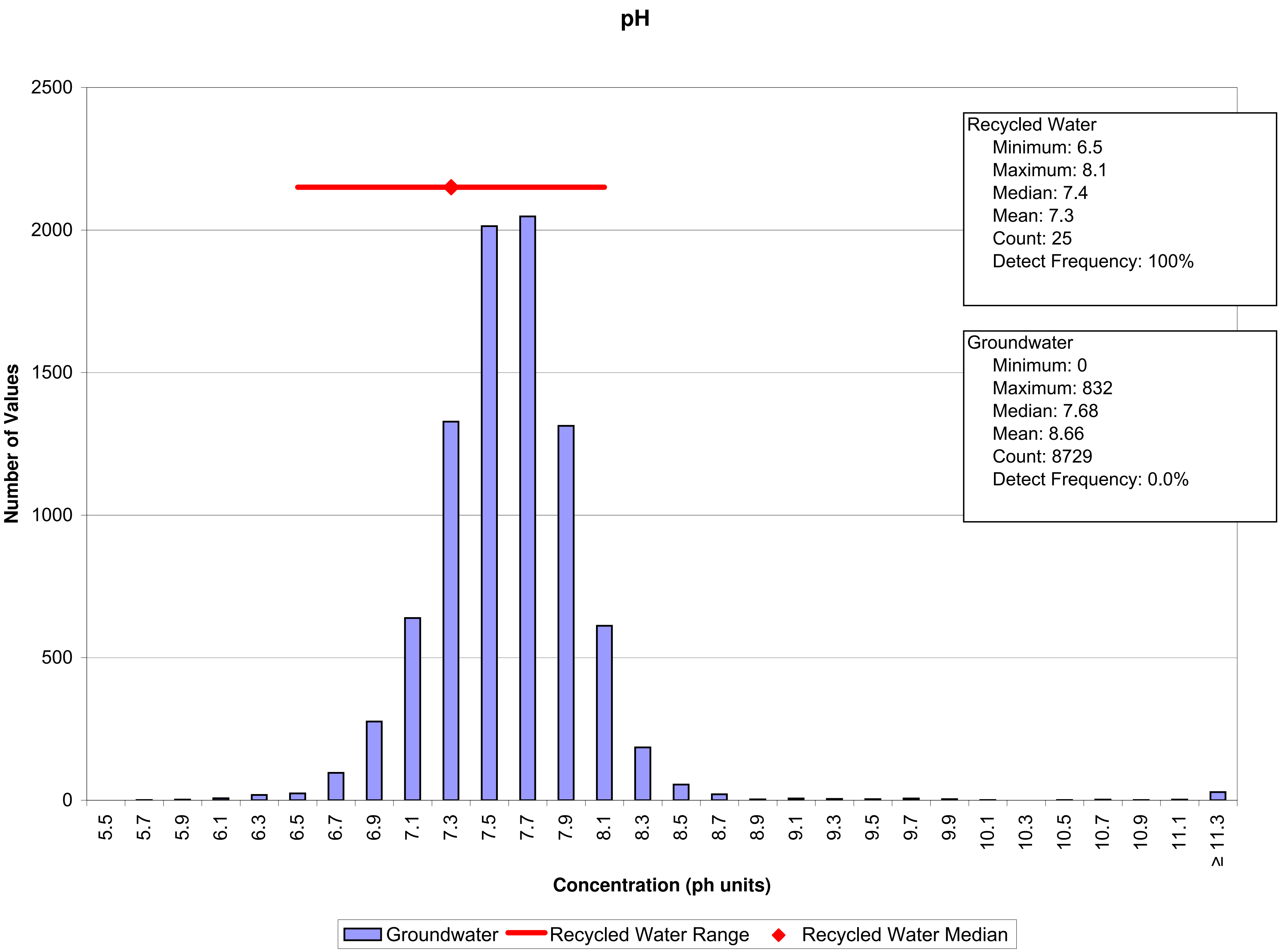
Groundwater
Minimum: 0
Maximum: 48000
Median: 0
Mean: 124
Count: 1571
Detect Frequency: 6.2%

Perchlorate

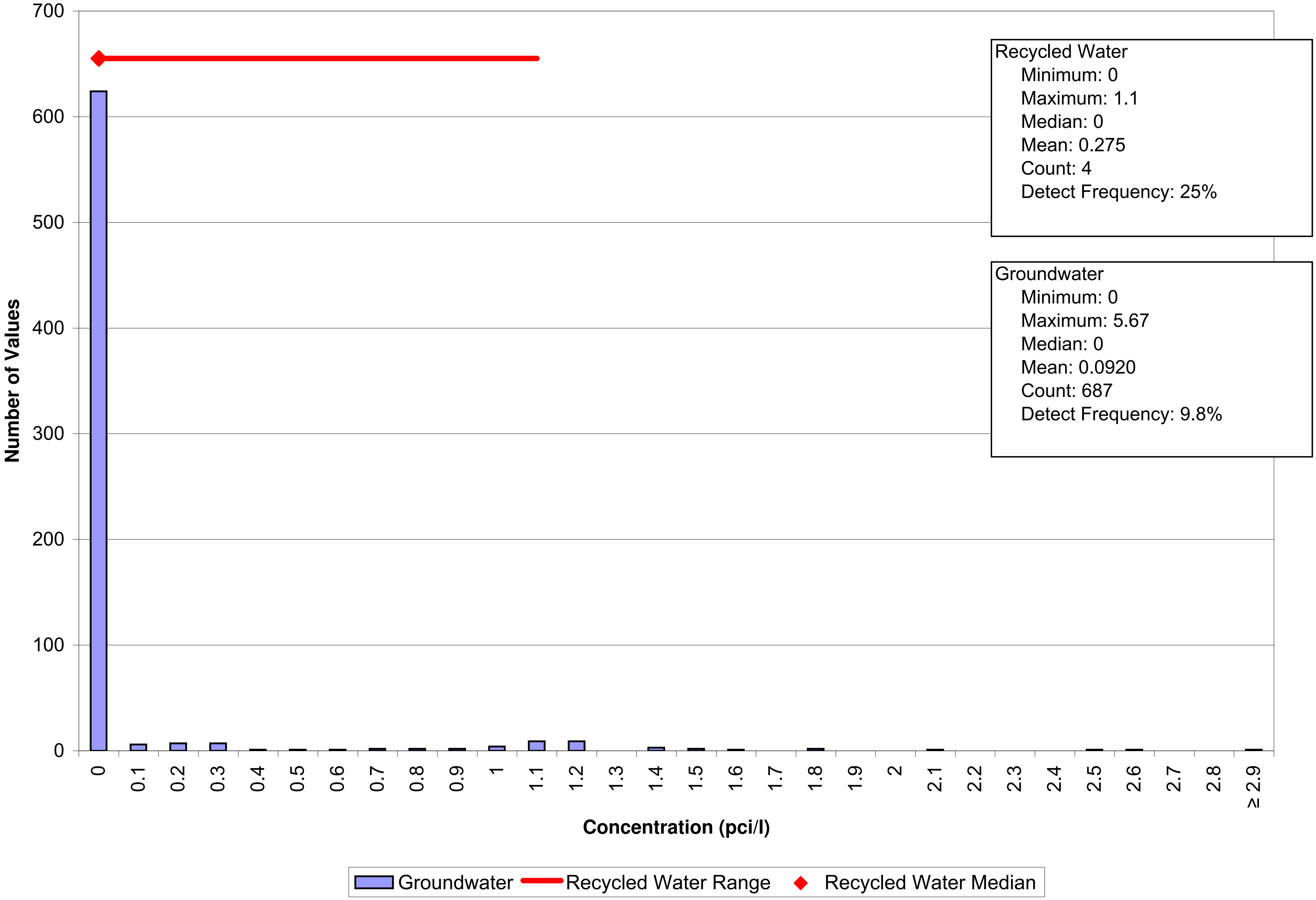


Recycled Water
- Minimum: 0
- Maximum: 12.3
- Median: 0
- Mean: 0.922
- Count: 18
- Detect Frequency: 11%

Groundwater
- Minimum: 0
- Maximum: 13
- Median: 0
- Mean: 0.707
- Count: 2223
- Detect Frequency: 13.0%

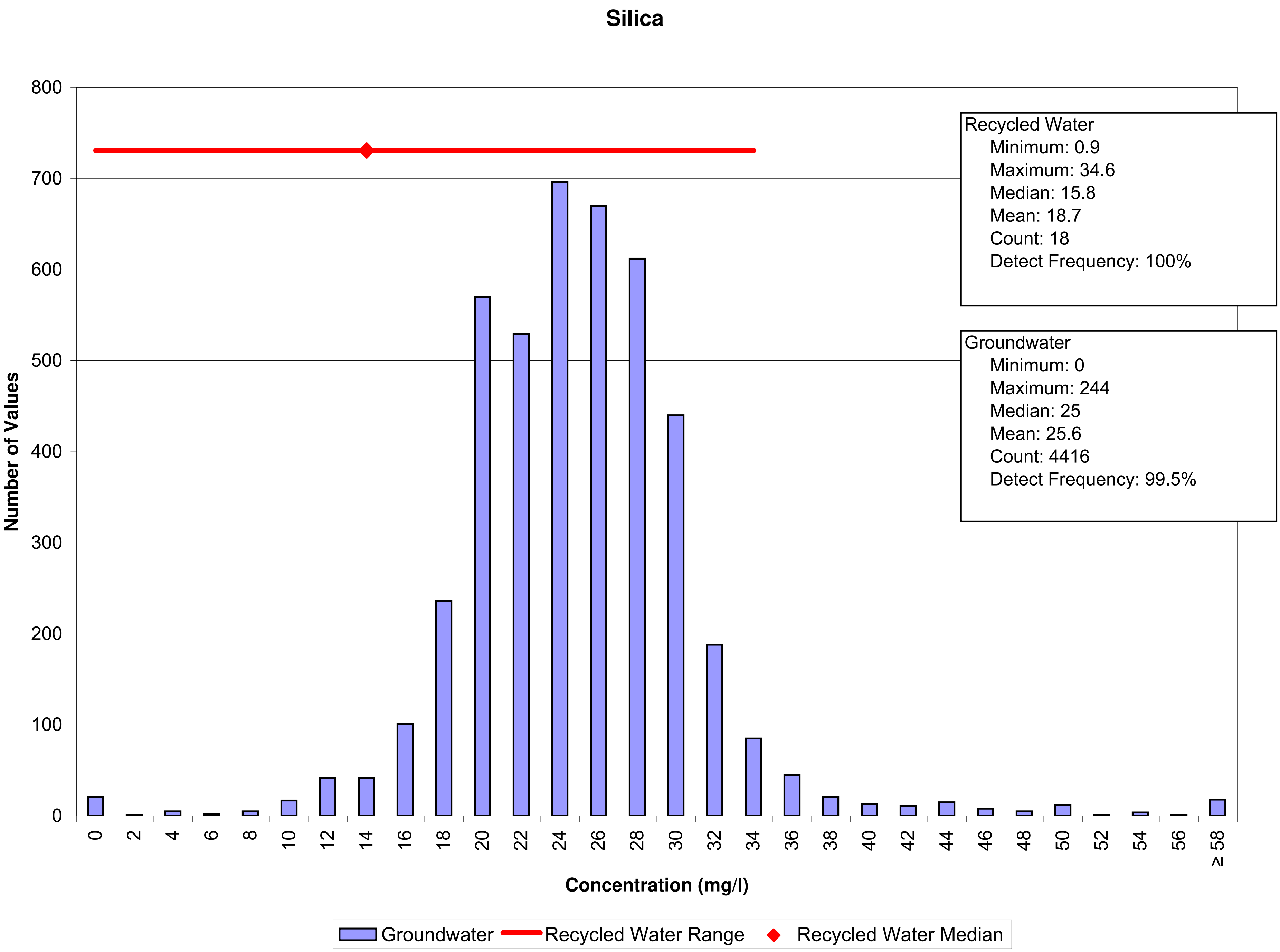

pH
Number of Values
2500
2000
1500
1000
500
0
5.5
5.7
5.9
6.1
6.3
6.5
6.7
6.9
7.1
7.3
7.5
7.7
7.9
8.1
8.3
8.5
8.7
8.9
9.1
9.3
9.5
9.7
9.9
10.1
10.3
10.5
10.7
10.9
11.1
≥ 11.3
Concentration (ph units)
Recycled Water
Minimum: 6.5
Maximum: 8.1
Median: 7.4
Mean: 7.3
Count: 25
Detect Frequency: 100%
Groundwater
Minimum: 0
Maximum: 832
Median: 7.68
Mean: 8.66
Count: 8729
Detect Frequency: 0.0%
Groundwater
Recycled Water Range
Recycled Water Median

Radium 228



Recycled Water
Minimum: 0
Maximum: 1.1
Median: 0
Mean: 0.275
Count: 4
Detect Frequency: 25%

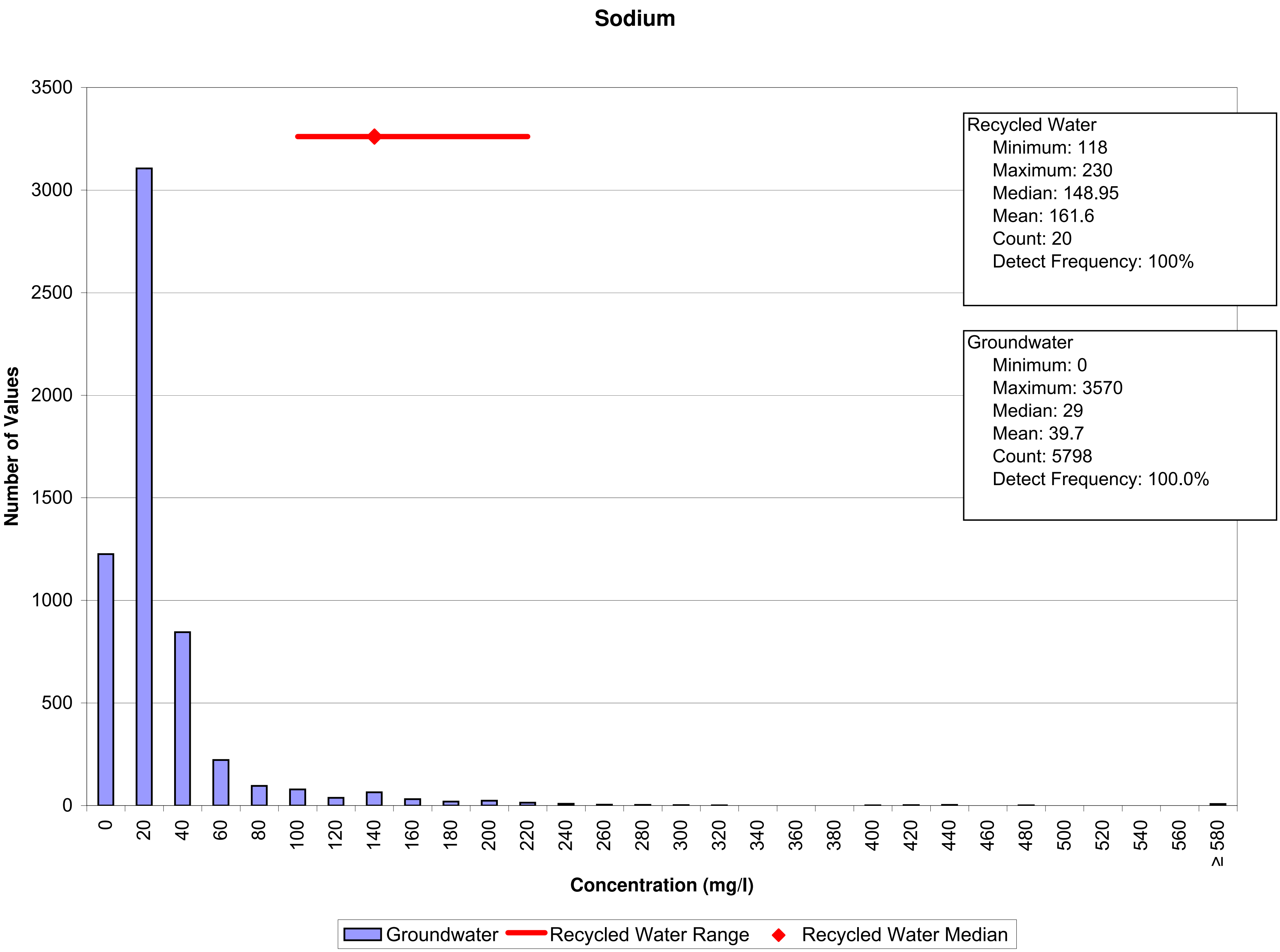
Groundwater
Minimum: 0
Maximum: 5.67
Median: 0
Mean: 0.0920
Count: 687
Detect Frequency: 9.8%



Silica

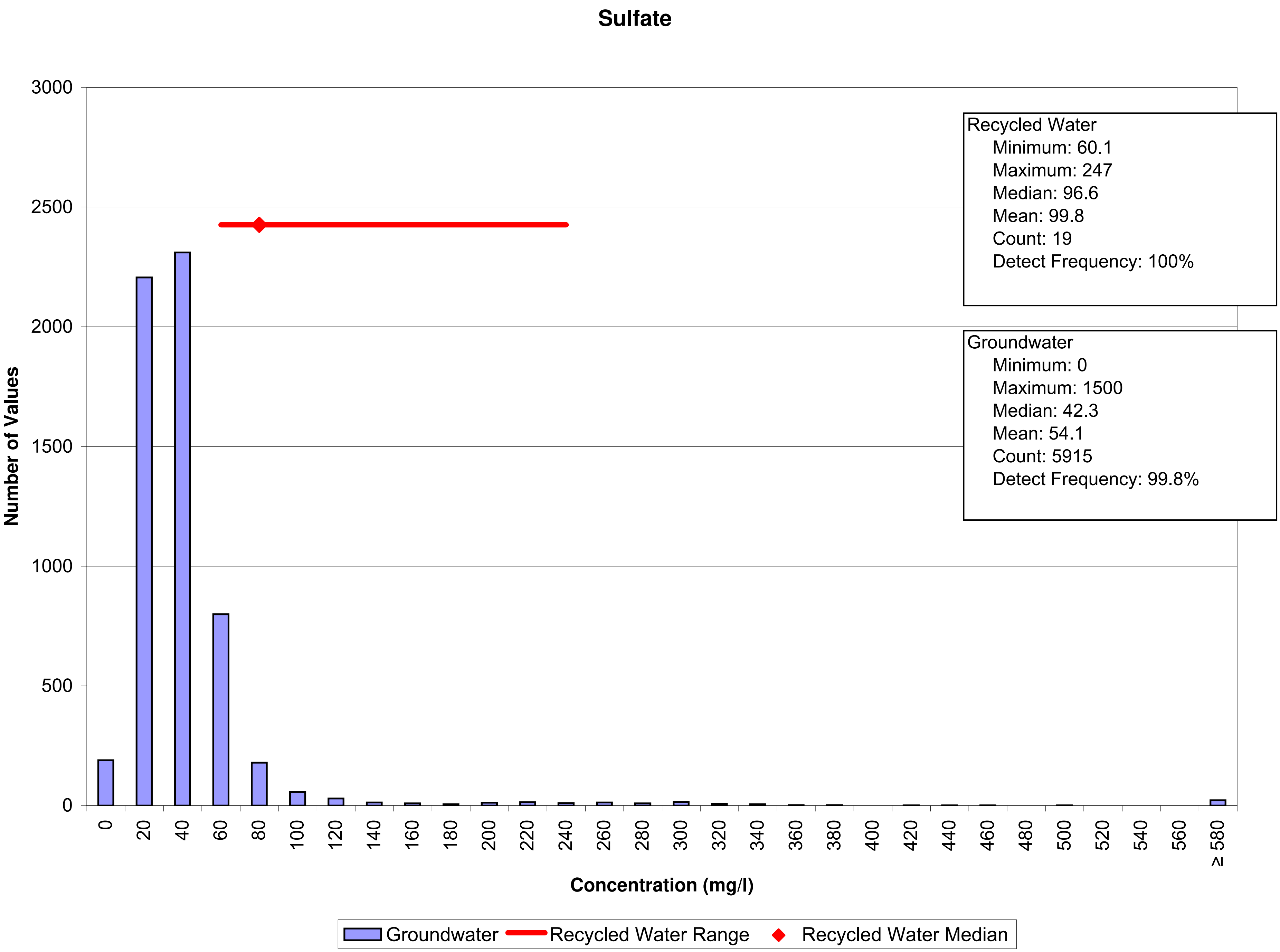
Recycled Water
Minimum: 0.9
Maximum: 34.6
Median: 15.8
Mean: 18.7
Count: 18
Detect Frequency: 100%

Groundwater
Minimum: 0
Maximum: 244
Median: 25
Mean: 25.6
Count: 4416
Detect Frequency: 99.5%



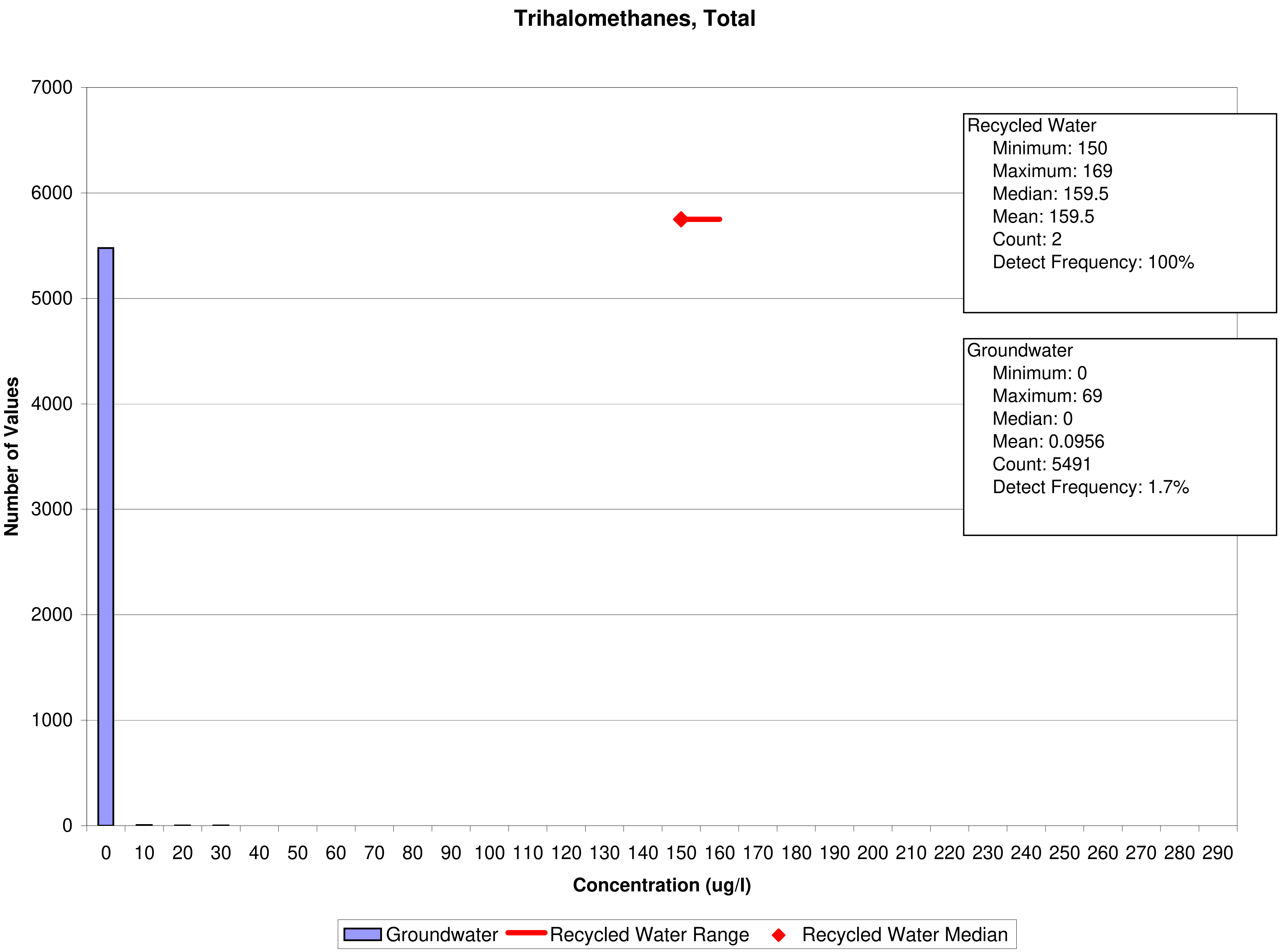
Recycled Water
Minimum: 118
Maximum: 230
Median: 148.95
Mean: 161.6
Count: 20
Detect Frequency: 100%

Groundwater
Minimum: 0
Maximum: 3570
Median: 29
Mean: 39.7
Count: 5798
Detect Frequency: 100.0%
]

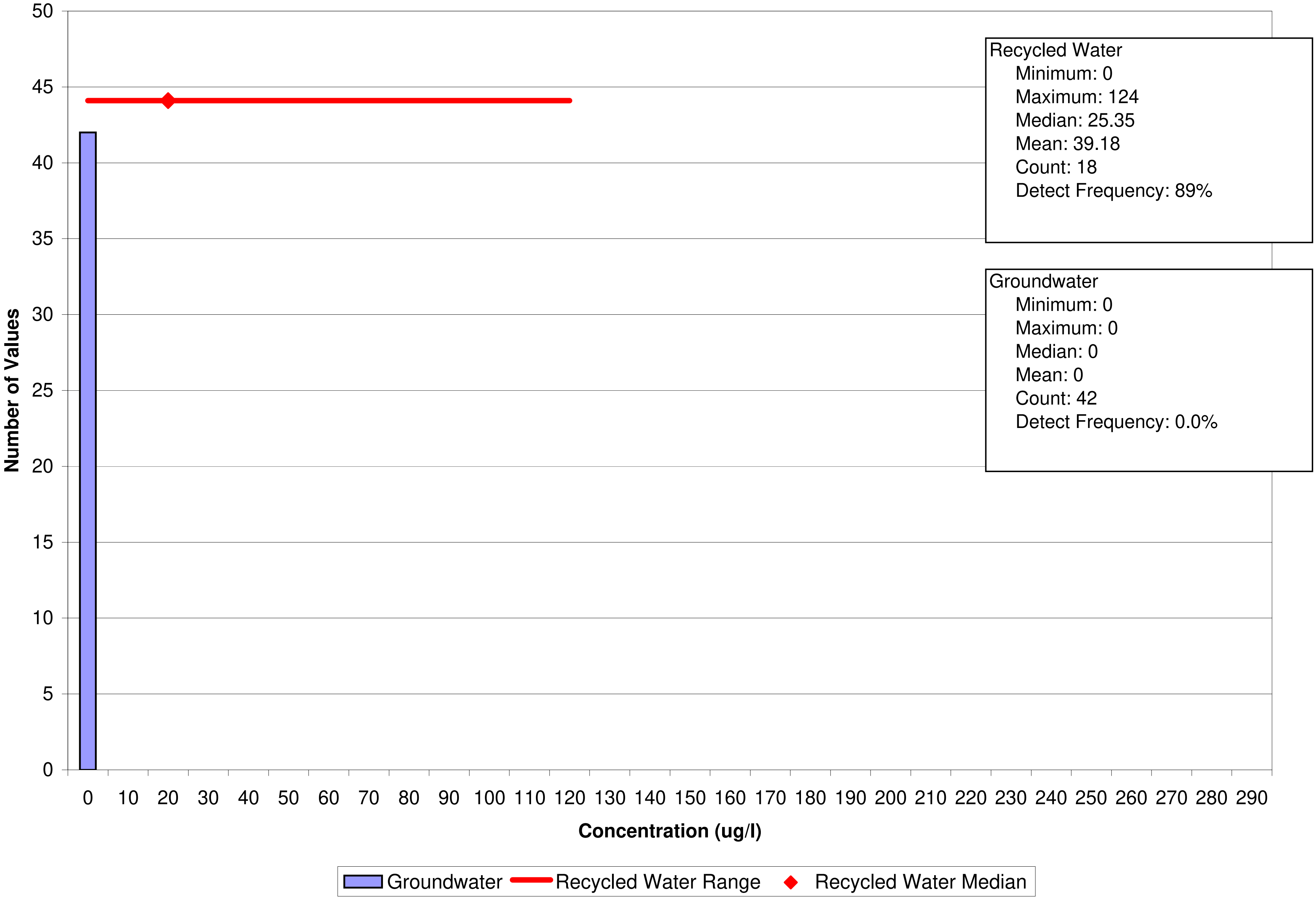


Recycled Water
Minimum: 60.1
Maximum: 247
Median: 96.6
Mean: 99.8
Count: 19
Detect Frequency: 100%

Groundwater
Minimum: 0
Maximum: 1500
Median: 42.3
Mean: 54.1
Count: 5915
Detect Frequency: 99.8%

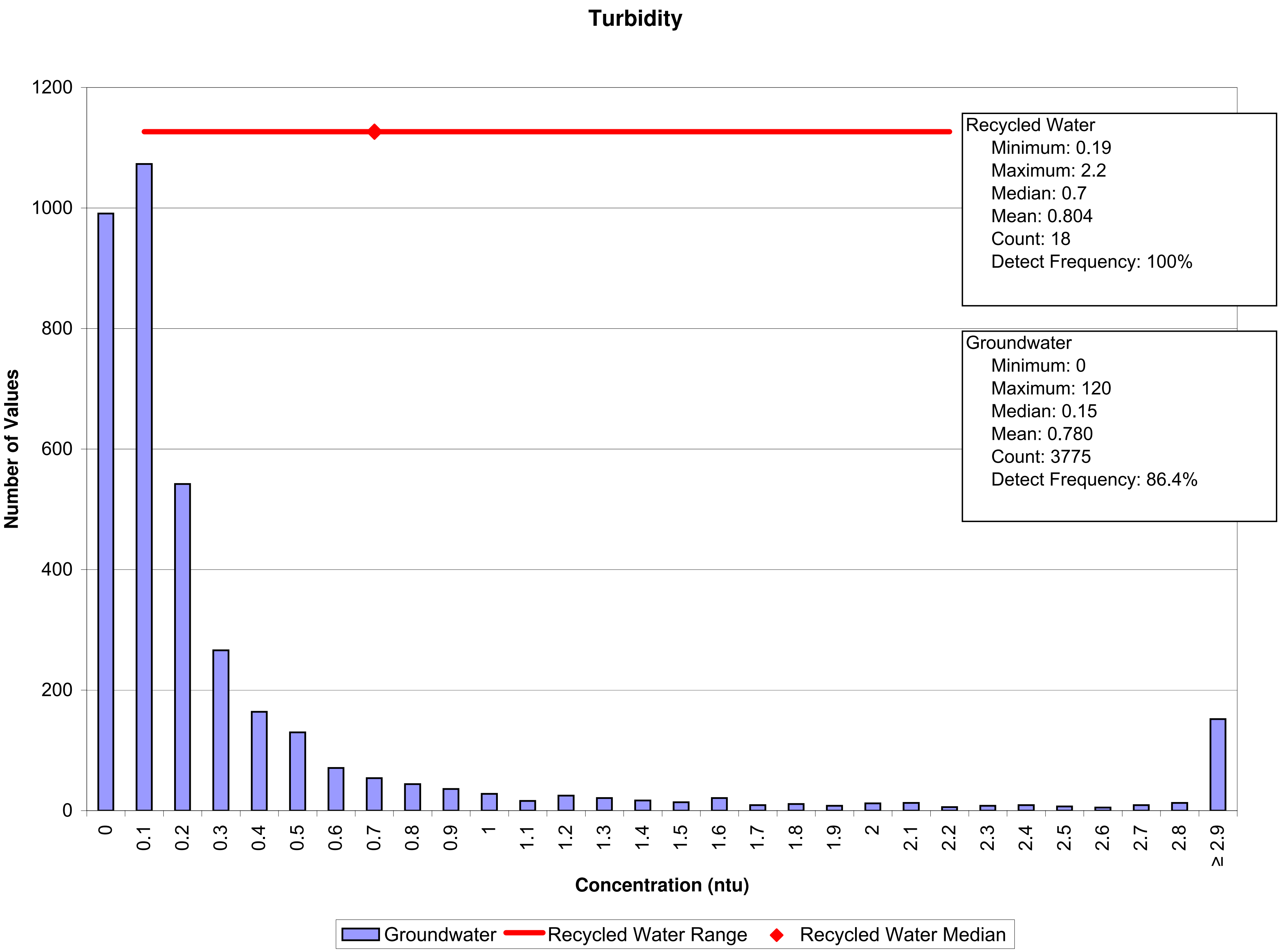

Trihalomethanes, Total
Recycled Water
Minimum: 150
Maximum: 169
Median: 159.5
Mean: 159.5
Count: 2
Detect Frequency: 100%
Groundwater
Minimum: 0
Maximum: 69
Median: 0
Mean: 0.0956
Count: 5491
Detect Frequency: 1.7%
Number of Values
7000
6000
5000
4000
3000
2000
1000
0
0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200 210 220 230 240 250 260 270 280 290
Concentration (ug/l)
Groundwater
Recycled Water Range
Recycled Water Median

Trichloroacetic Acid



Recycled Water
Minimum: 0
Maximum: 124
Median: 25.35
Mean: 39.18
Count: 18
Detect Frequency: 89%

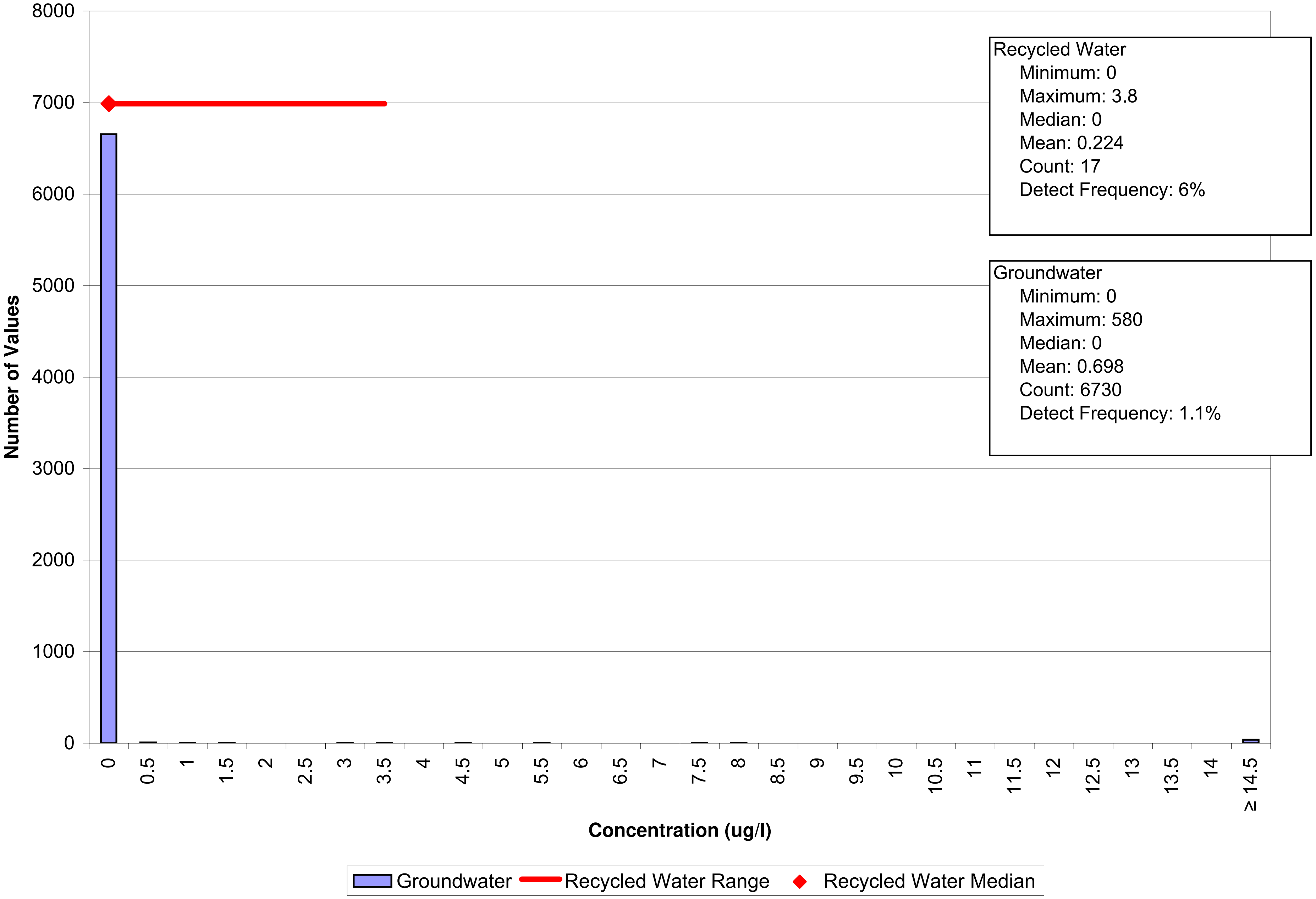
Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 42
Detect Frequency: 0.0%



Recycled Water
Minimum: 0.19
Maximum: 2.2
Median: 0.7
Mean: 0.804
Count: 18
Detect Frequency: 100%

Groundwater
Minimum: 0
Maximum: 120
Median: 0.15
Mean: 0.780
Count: 3775
Detect Frequency: 86.4%

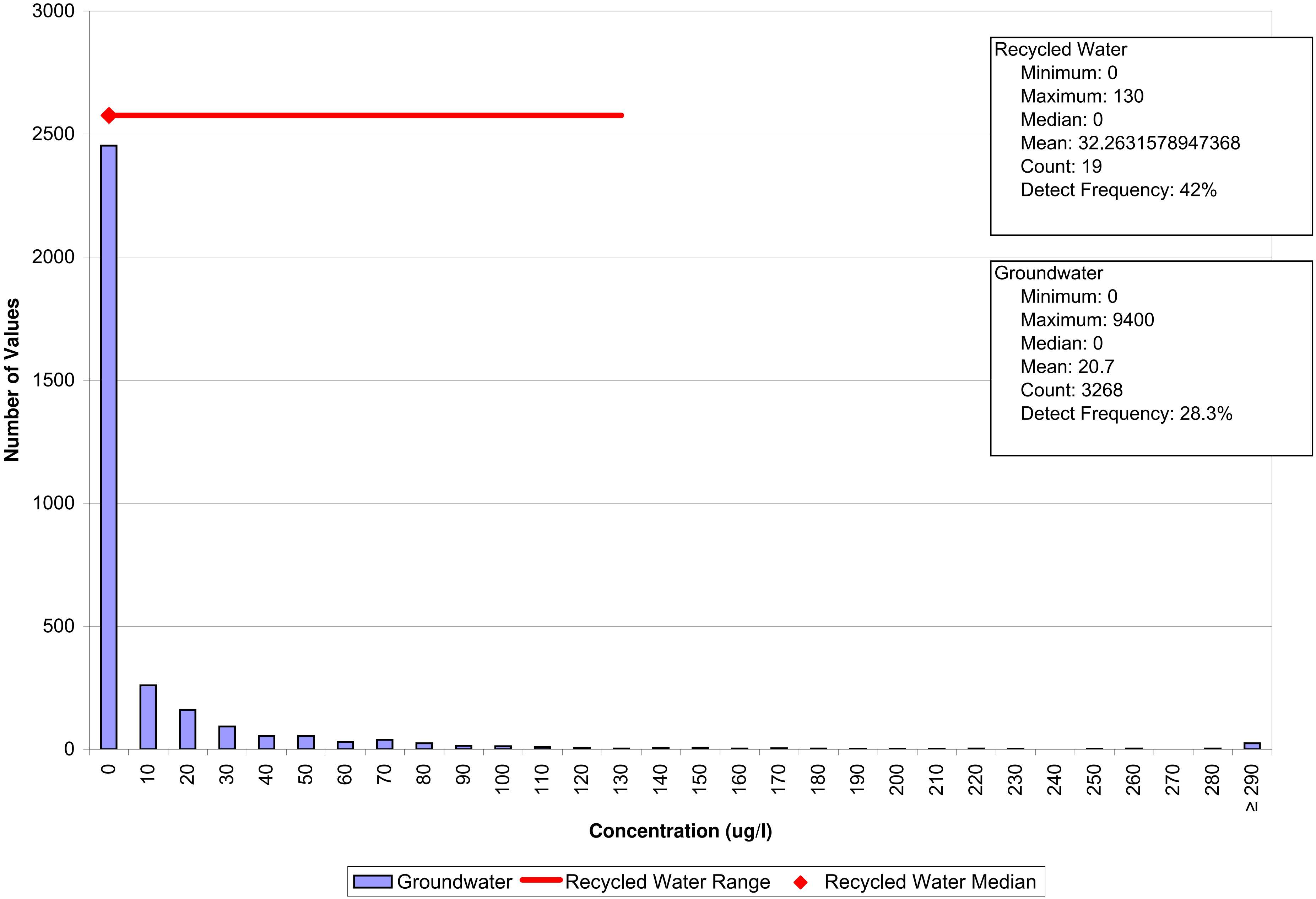
Xylenes, Total



Recycled Water
- Minimum: 0
- Maximum: 3.8
- Median: 0
- Mean: 0.224
- Count: 17
- Detect Frequency: 6%

Groundwater
- Minimum: 0
- Maximum: 580
- Median: 0
- Mean: 0.698
- Count: 6730
- Detect Frequency: 1.1%

Zinc

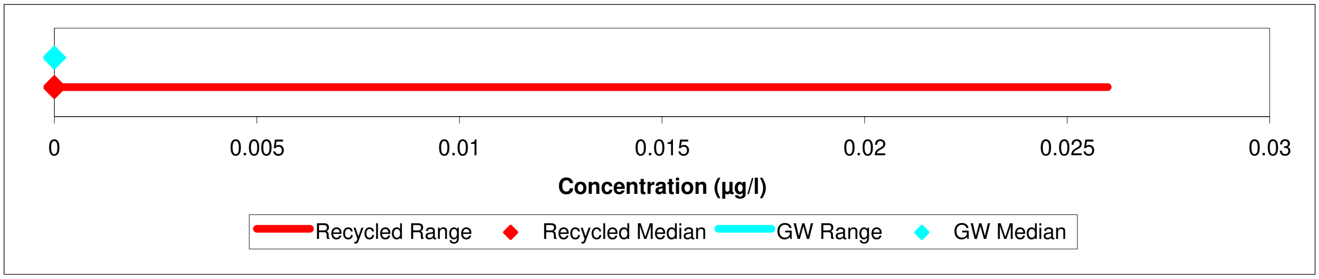

Number of Values
3000
2500
2000
1500
1000
500
0
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
230
240
250
260
270
280
≥ 290
Concentration (ug/l)
Recycled Water
Minimum: 0
Maximum: 130
Median: 0
Mean: 32.2631578947368
Count: 19
Detect Frequency: 42%
Groundwater
Minimum: 0
Maximum: 9400
Median: 0
Mean: 20.7
Count: 3268
Detect Frequency: 28.3%
Groundwater
Recycled Water Range
Recycled Water Median

APPENDIX I-B

BOX PLOTS FOR GROUNDWATER AND RECLAIMED WATER CHEMISTRY

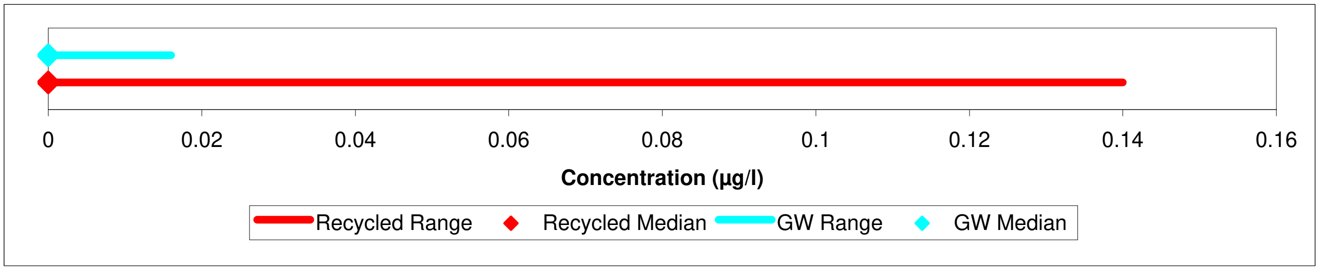
GROUNDWATER AND RECYCLED WATER CHEMISTRY
SUMMARY STATISTICS

AP/APEO, Halogenated



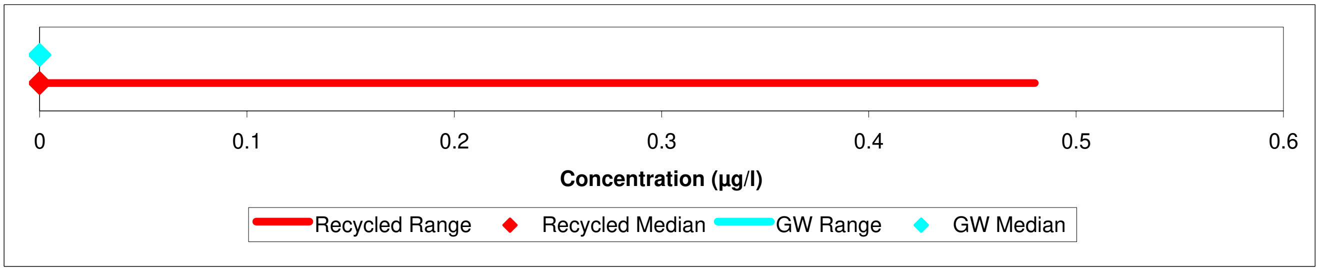
Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 0.026	Maximum: 0
Median: 0	Median: 0
Mean: 0.0027	Mean: 0
Count: 12	Count: 10
Detect Frequency: 17%	Detect Frequency: 0.0%

AP1EO



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 0.14	Maximum: 0.016
Median: 0	Median: 0
Mean: 0.0187	Mean: 0.001067
Count: 15	Count: 15
Detect Frequency: 13%	Detect Frequency: 6.7%

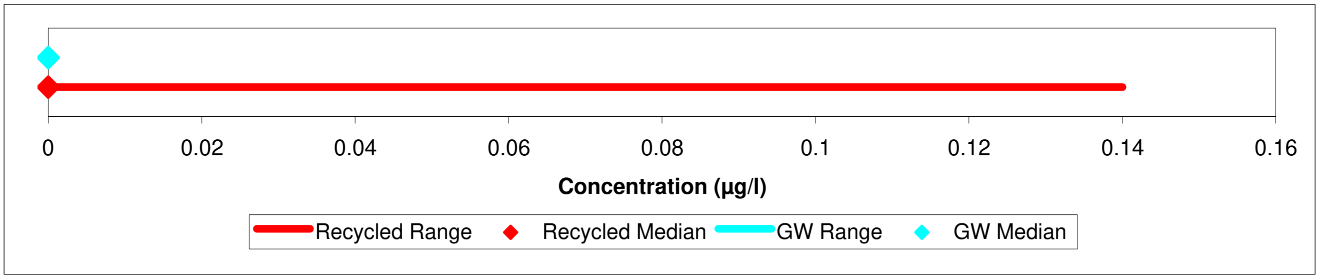
AP2EO



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 0.48	Maximum: 0
Median: 0	Median: 0
Mean: 0.048	Mean: 0
Count: 10	Count: 15
Detect Frequency: 10%	Detect Frequency: 0.0%

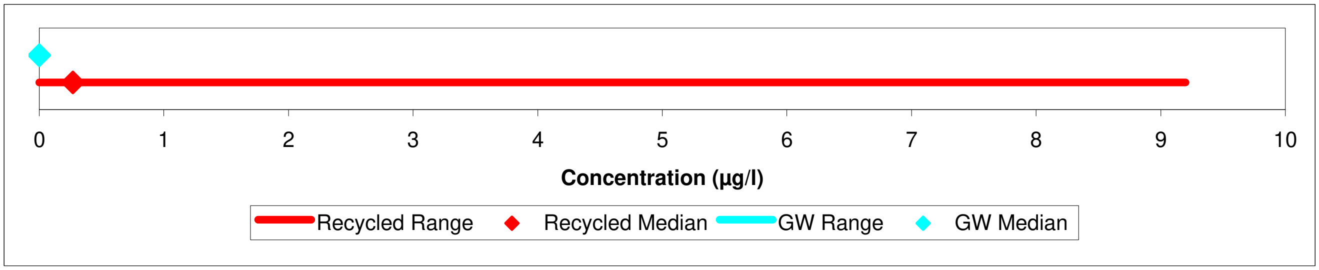
GROUNDWATER AND RECYCLED WATER CHEMISTRY
SUMMARY STATISTICS

AP3EO



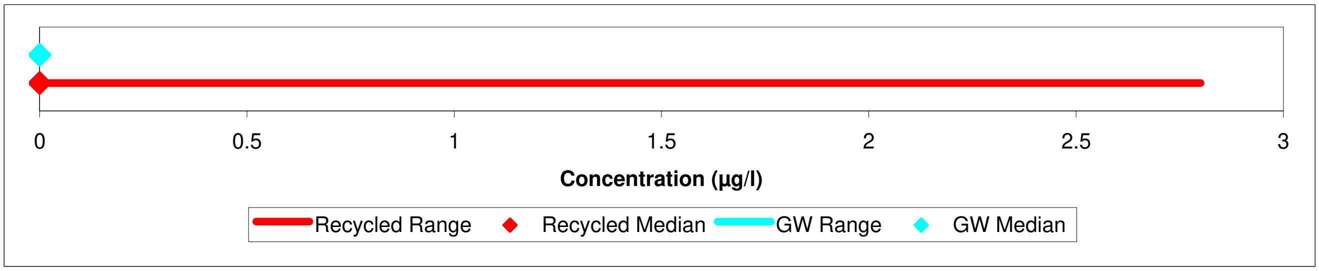
Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 0.14	Maximum: 0
Median: 0	Median: 0
Mean: 0.014	Mean: 0
Count: 10	Count: 15
Detect Frequency: 10%	Detect Frequency: 0.0%

APEC m/z 235



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 9.2	Maximum: 0.018
Median: 0.27	Median: 0
Mean: 2.044	Mean: 0.00253
Count: 10	Count: 15
Detect Frequency: 50%	Detect Frequency: 20.0%

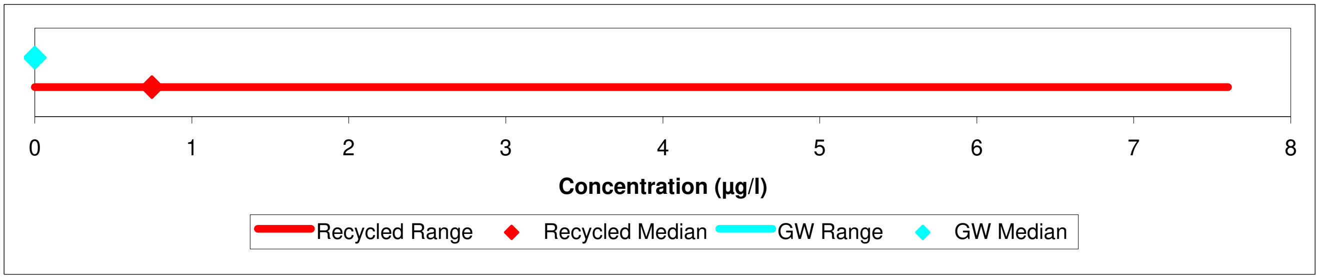
APEC m/z 249



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 2.8	Maximum: 0.014
Median: 0	Median: 0
Mean: 0.494	Mean: 0.002267
Count: 10	Count: 15
Detect Frequency: 40%	Detect Frequency: 40.0%

GROUNDWATER AND RECYCLED WATER CHEMISTRY SUMMARY STATISTICS

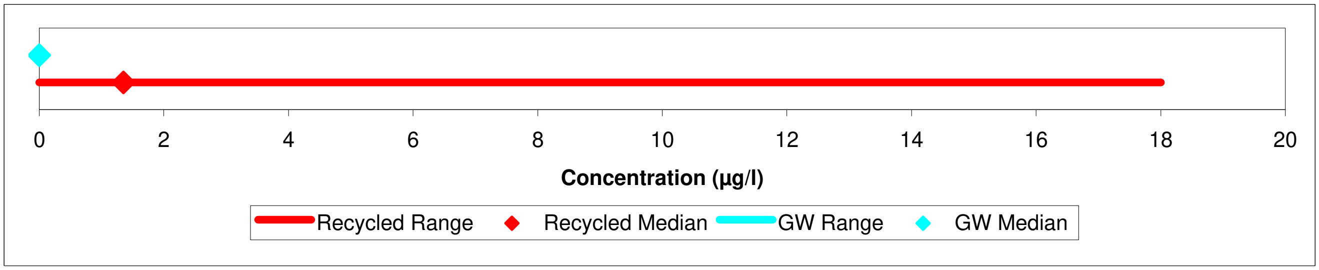
APEC m/z 279



Recycled Water
Minimum: 0
Maximum: 7.6
Median: 0.745
Mean: 1.952
Count: 10
Detect Frequency: 50%

Groundwater
Minimum: 0
Maximum: 0.019
Median: 0
Mean: 0.0024
Count: 15
Detect Frequency: 13.3%

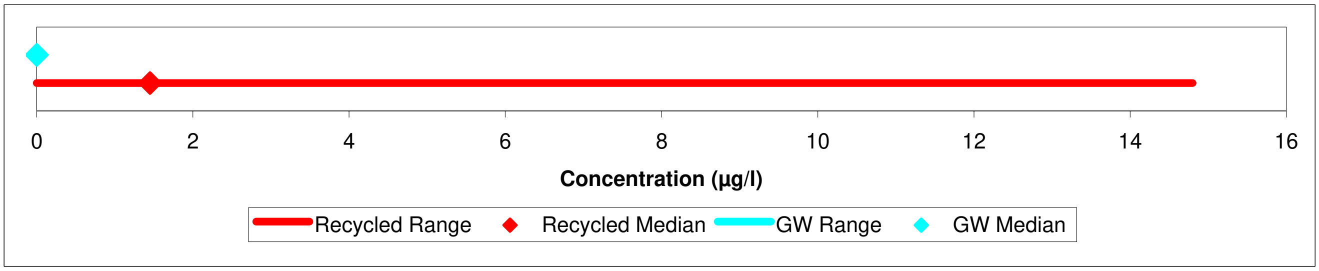
APEC Total



Recycled Water
Minimum: 0
Maximum: 18
Median: 1.35
Mean: 3.599
Count: 14
Detect Frequency: 64%

Groundwater
Minimum: 0
Maximum: 0.039
Median: 0
Mean: 0.0072
Count: 15
Detect Frequency: 40.0%

APEC, Halogenated

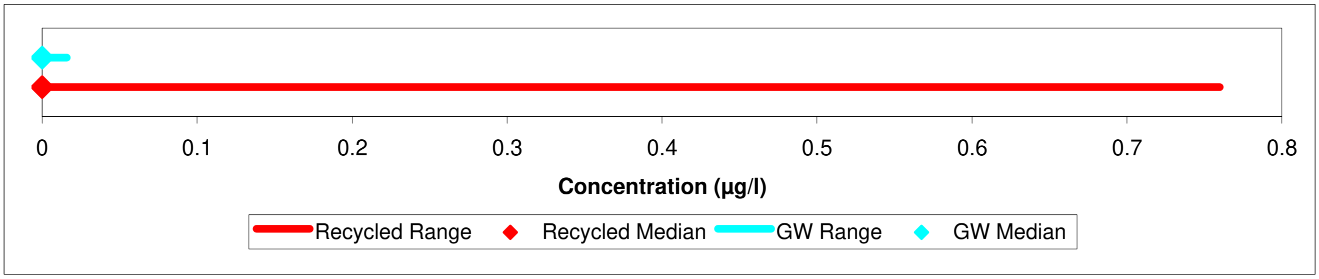


Recycled Water
Minimum: 0
Maximum: 14.8
Median: 1.45
Mean: 3.145
Count: 12
Detect Frequency: 92%

Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 10
Detect Frequency: 0.0%

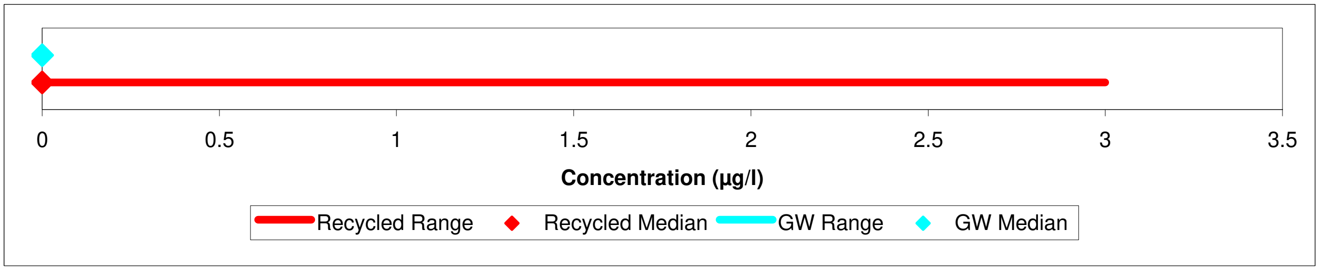
GROUNDWATER AND RECYCLED WATER CHEMISTRY SUMMARY STATISTICS

APEO Total



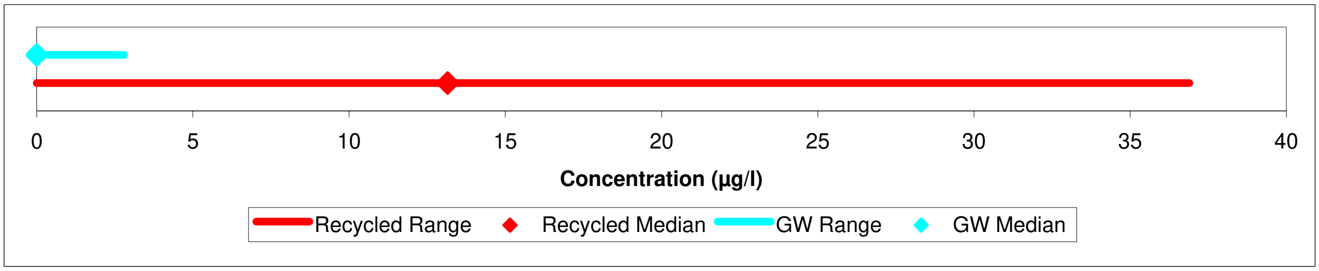
Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 0.76	Maximum: 0.016
Median: 0	Median: 0
Mean: 0.09	Mean: 0.001067
Count: 10	Count: 15
Detect Frequency: 20%	Detect Frequency: 6.7%

Bromate



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 3	Maximum: 0
Median: 0	Median: 0
Mean: 0.333	Mean: 0
Count: 18	Count: 19
Detect Frequency: 11%	Detect Frequency: 0.0%

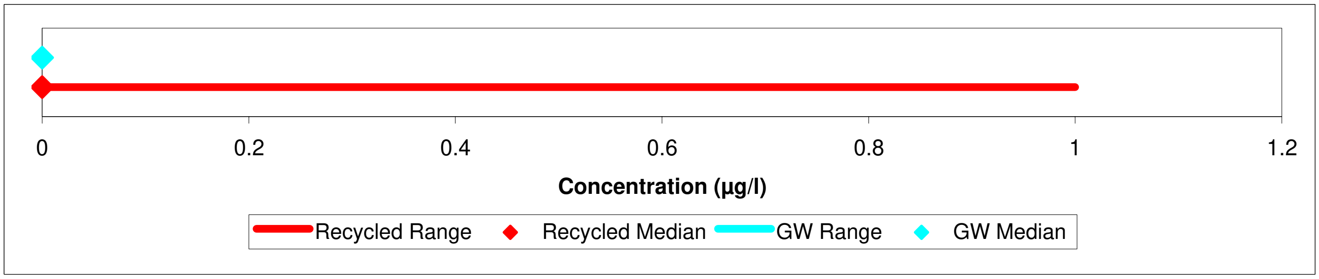
Bromochloroacetic Acid



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 36.9	Maximum: 2.8
Median: 13.15	Median: 0
Mean: 14.129	Mean: 0.6
Count: 14	Count: 9
Detect Frequency: 71%	Detect Frequency: 33.3%

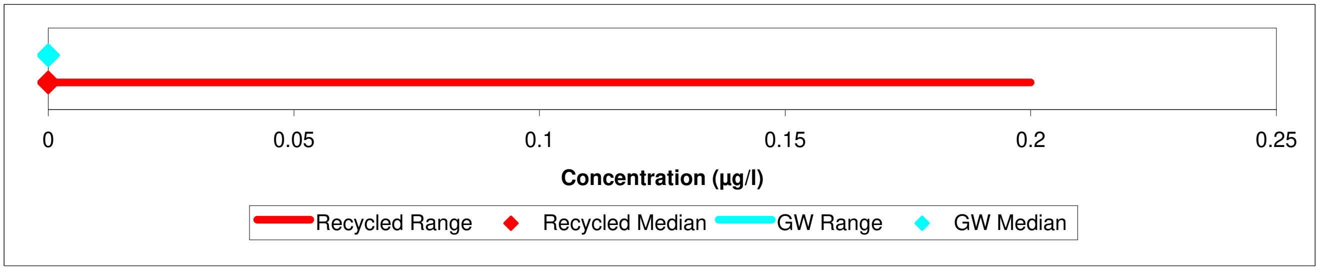
GROUNDWATER AND RECYCLED WATER CHEMISTRY
SUMMARY STATISTICS

Caffeine



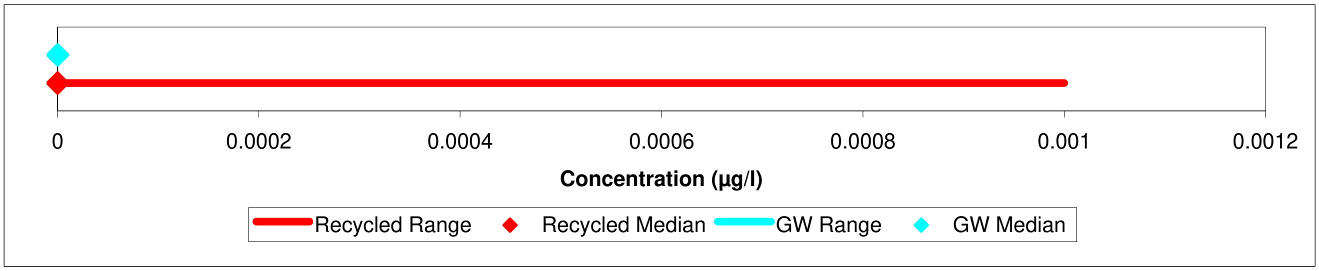
Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 1	Maximum: 0
Median: 0	Median: 0
Mean: 0.04	Mean: 0
Count: 25	Count: 18
Detect Frequency: 4%	Detect Frequency: 0.0%

Carbamazepine



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 0.2	Maximum: 0
Median: 0	Median: 0
Mean: 0.0167	Mean: 0
Count: 15	Count: 15
Detect Frequency: 13%	Detect Frequency: 0.0%

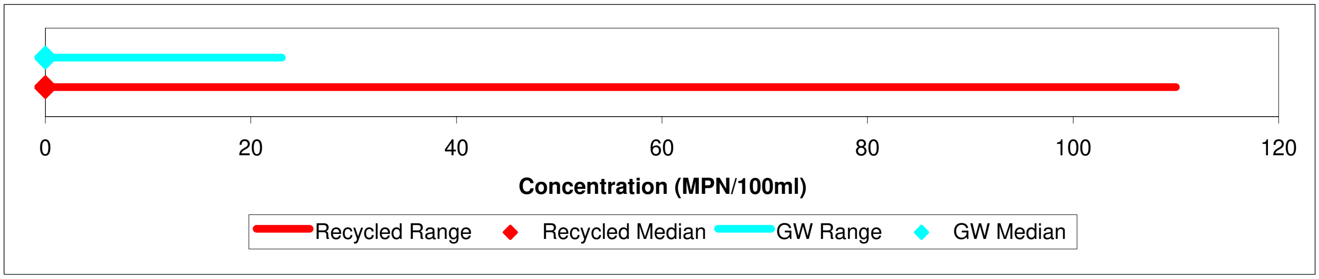
Carisoprodol



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 0.001	Maximum: 0
Median: 0	Median: 0
Mean: 0.00009	Mean: 0
Count: 11	Count: 10
Detect Frequency: 9%	Detect Frequency: 0.0%

GROUNDWATER AND RECYCLED WATER CHEMISTRY
SUMMARY STATISTICS

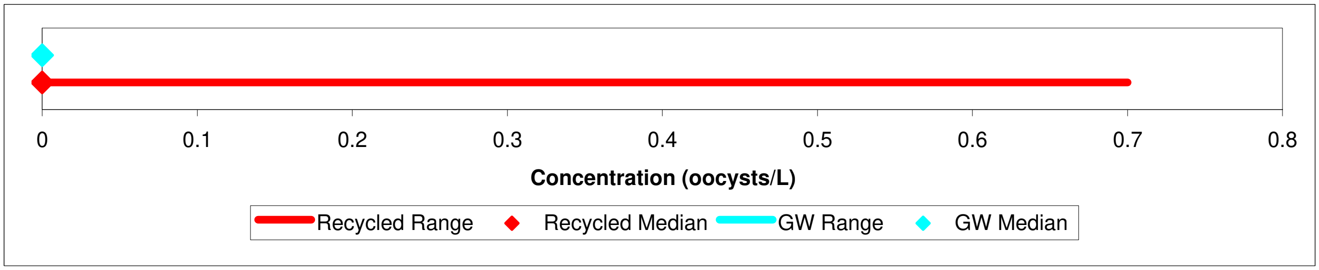
Coliforms, Total



Recycled Water
Minimum: 0
Maximum: 110
Median: 0
Mean: 8.056
Count: 18
Detect Frequency: 33%

Groundwater
Minimum: 0
Maximum: 23
Median: 0
Mean: 1.211
Count: 19
Detect Frequency: 5.3%

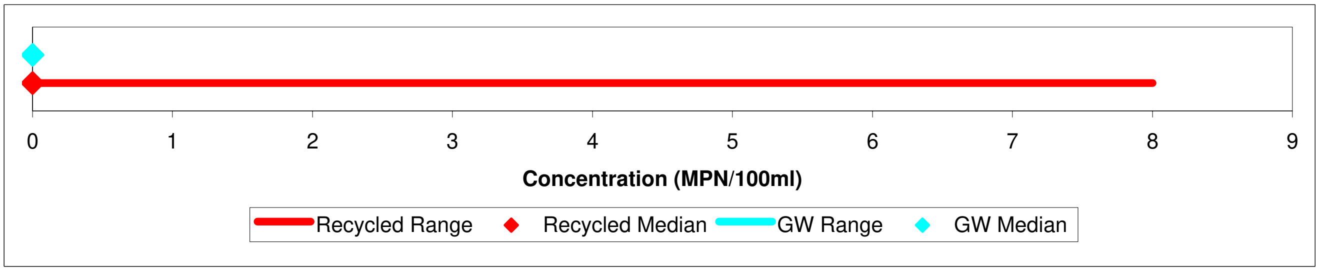
Cryptosporidium Oocysts



Recycled Water
Minimum: 0
Maximum: 0.7
Median: 0
Mean: 0.06
Count: 15
Detect Frequency: 13%

Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 20
Detect Frequency: 0.0%

E. Coli

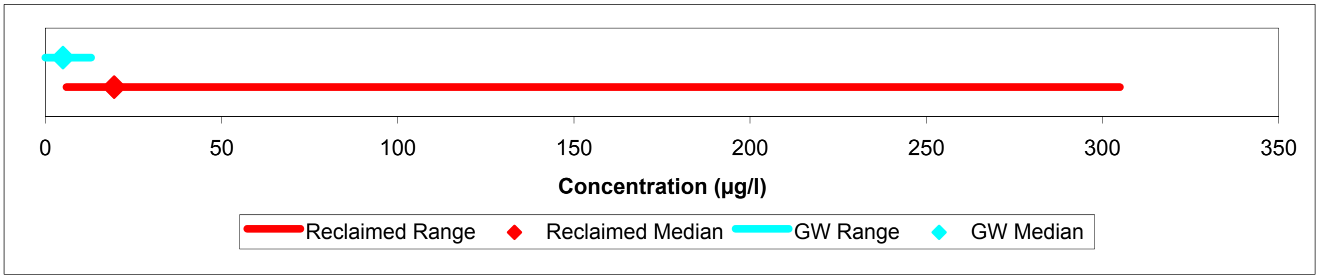


Recycled Water
Minimum: 0
Maximum: 8
Median: 0
Mean: 0.444
Count: 18
Detect Frequency: 6%

Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 5
Detect Frequency: 0.0%

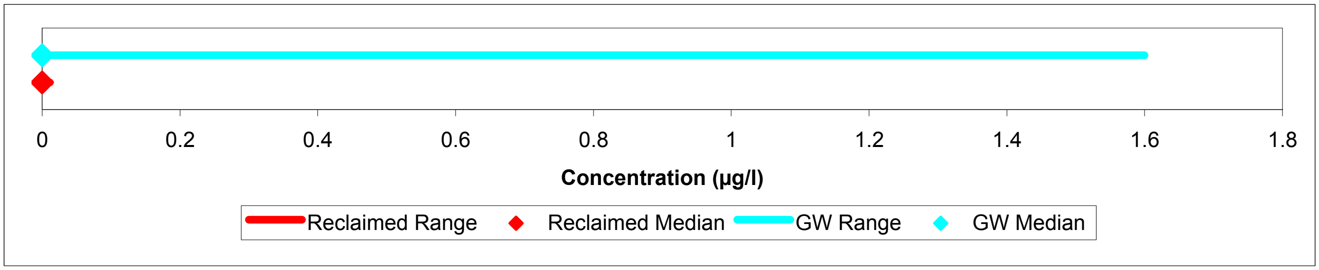
GROUNDWATER AND RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

EDTA



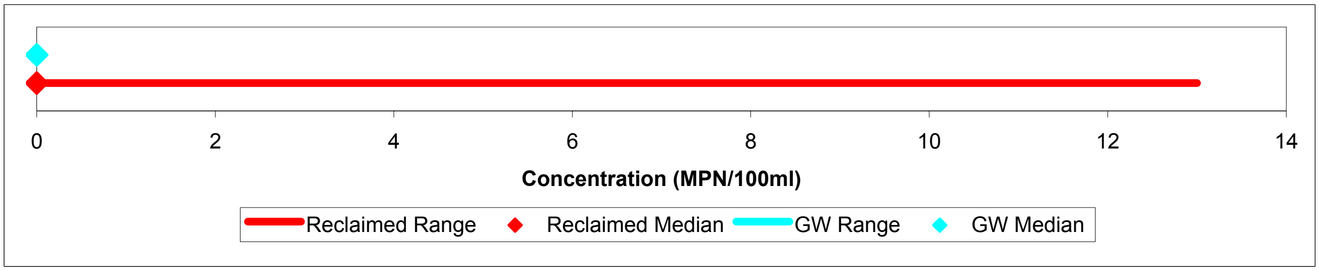
Reclaimed Water	Groundwater
Minimum: 6	Minimum: 0
Maximum: 305	Maximum: 13
Median: 19.5	Median: 5
Mean: 105.383	Mean: 4.736
Count: 6	Count: 11
Detect Frequency: 100%	Detect Frequency: 54.5%

Estrone



Reclaimed Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 0.011	Maximum: 1.6
Median: 0	Median: 0
Mean: 0.0006	Mean: 0.1067
Count: 18	Count: 15
Detect Frequency: 6%	Detect Frequency: 6.7%

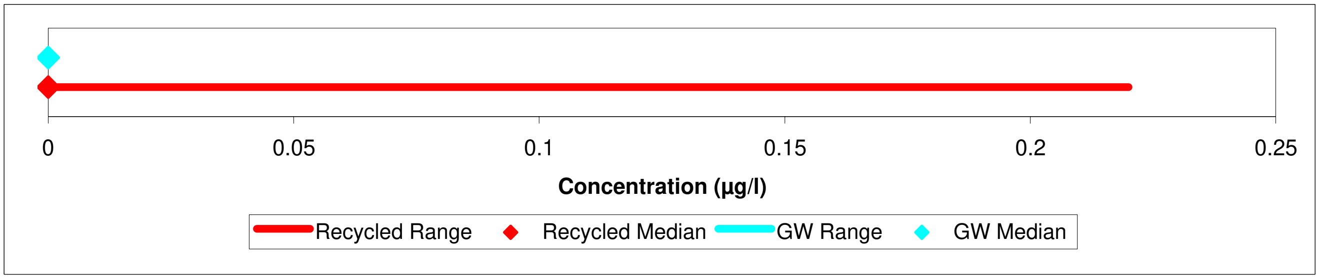
Fecal Coliforms



Reclaimed Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 13	Maximum: 0
Median: 0	Median: 0
Mean: 0.722	Mean: 0
Count: 18	Count: 5
Detect Frequency: 6%	Detect Frequency: 0.0%

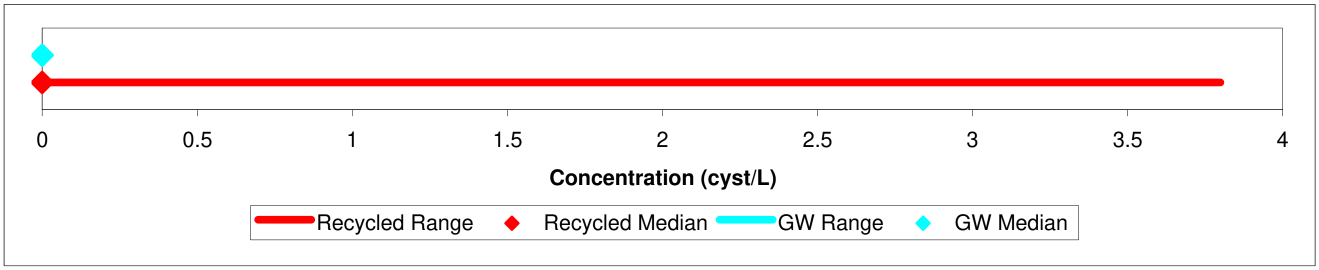
RECYCLED WATER CHEMISTRY
SUMMARY STATISTICS

Gemfibrozil



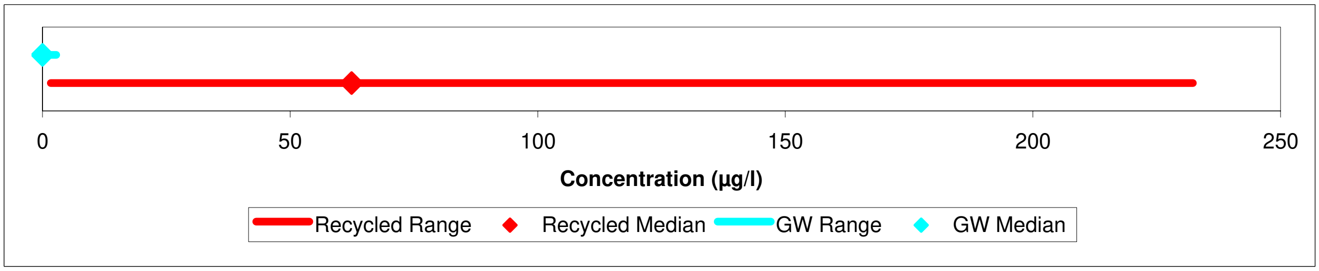
Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 0.22	Maximum: 0
Median: 0	Median: 0
Mean: 0.0167	Mean: 0
Count: 15	Count: 15
Detect Frequency: 13%	Detect Frequency: 0.0%

Giardia



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 3.8	Maximum: 0
Median: 0	Median: 0
Mean: 0.313	Mean: 0
Count: 15	Count: 20
Detect Frequency: 27%	Detect Frequency: 0.0%

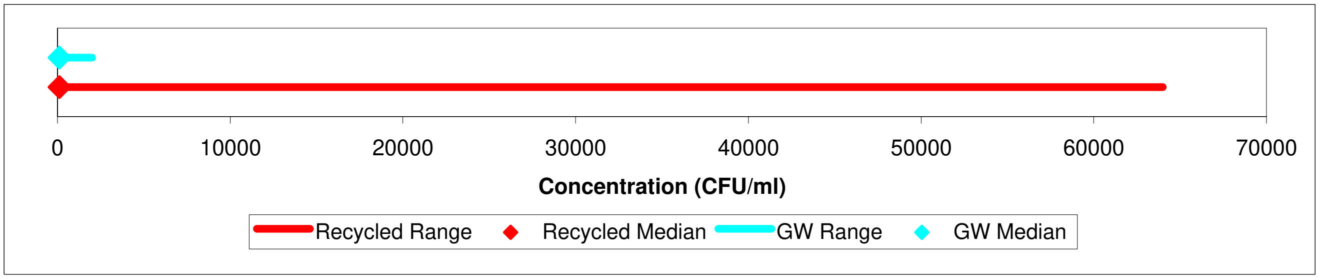
Haloacetic Acids (5)



Recycled Water	Groundwater
Minimum: 1.7	Minimum: 0
Maximum: 232.3	Maximum: 2.8
Median: 62.45	Median: 0
Mean: 83.361	Mean: 0.489
Count: 18	Count: 9
Detect Frequency: 100%	Detect Frequency: 22.2%

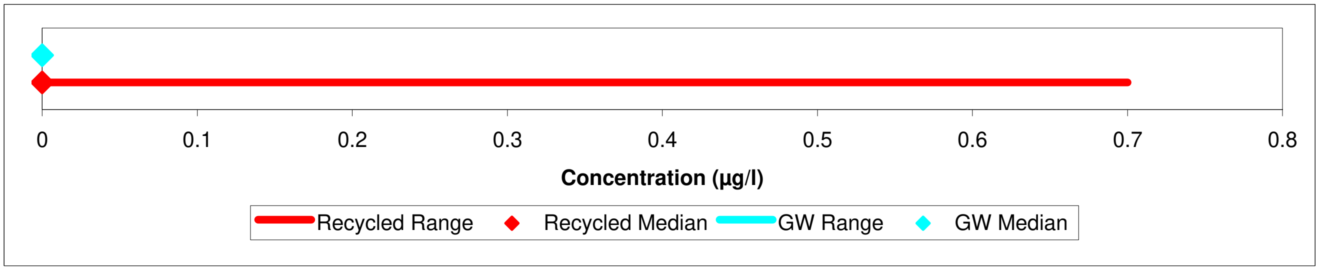
GROUNDWATER AND RECYCLED WATER CHEMISTRY
SUMMARY STATISTICS

Heterotrophic Plate Count by R2A



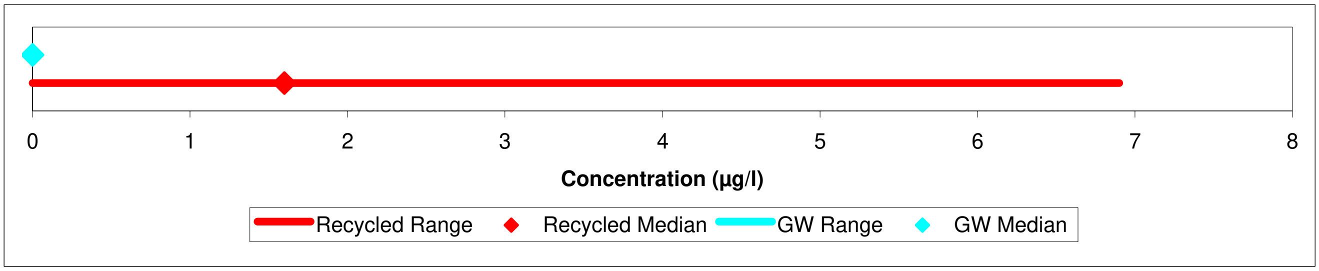
Recycled Water	Groundwater
Minimum: 0	Minimum: 2
Maximum: 64000	Maximum: 2000
Median: 117	Median: 110
Mean: 4770.61	Mean: 417.47
Count: 18	Count: 19
Detect Frequency: 83%	Detect Frequency: 100.0%

Ibuprofen



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 0.7	Maximum: 0
Median: 0	Median: 0
Mean: 0.0611	Mean: 0
Count: 15	Count: 15
Detect Frequency: 27%	Detect Frequency: 0.0%

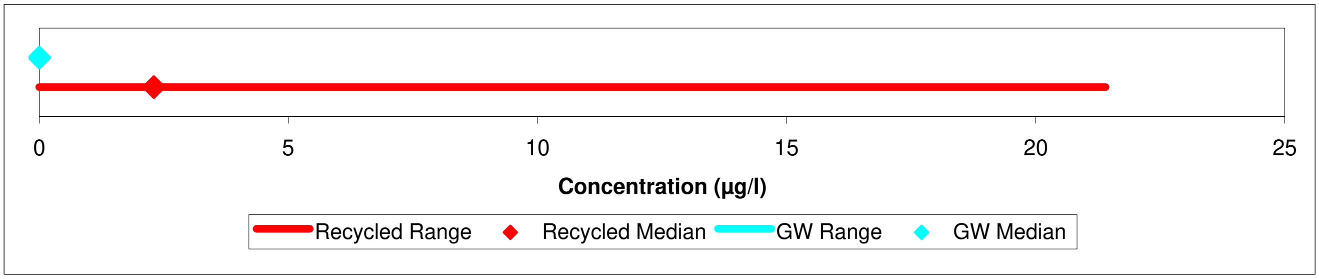
Monobromoacetic Acid



Recycled Water	Groundwater
Minimum: 0	Minimum: 0
Maximum: 6.9	Maximum: 0
Median: 1.6	Median: 0
Mean: 1.979	Mean: 0
Count: 19	Count: 9
Detect Frequency: 58%	Detect Frequency: 0.0%

GROUNDWATER AND RECYCLED WATER CHEMISTRY SUMMARY STATISTICS

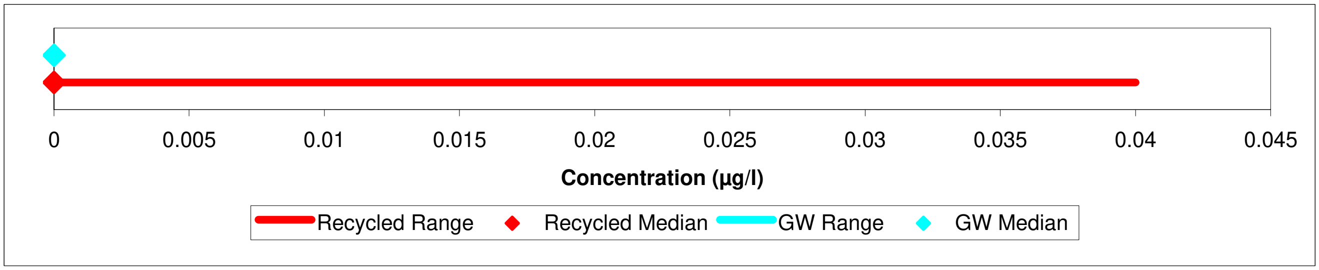
Monochloroacetic Acid



Recycled Water
Minimum: 0
Maximum: 21.4
Median: 2.3
Mean: 5.188
Count: 16
Detect Frequency: 63%

Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 9
Detect Frequency: 0.0%

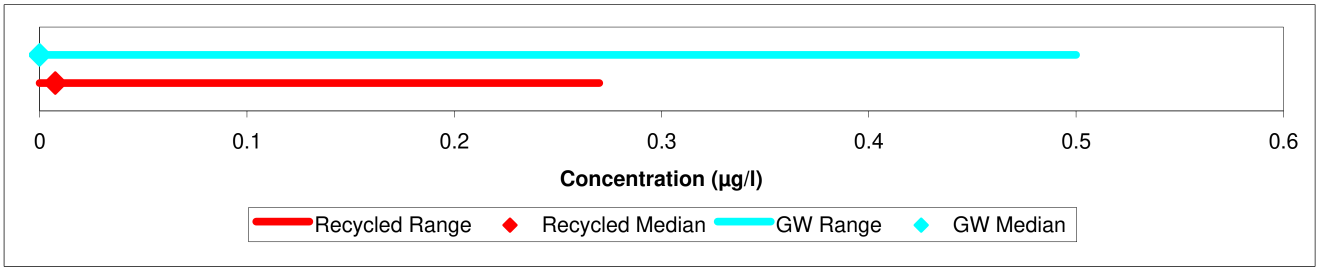
Naproxen



Recycled Water
Minimum: 0
Maximum: 0.04
Median: 0
Mean: 0.00267
Count: 15
Detect Frequency: 7%

Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 15
Detect Frequency: 0.0%

NBBS

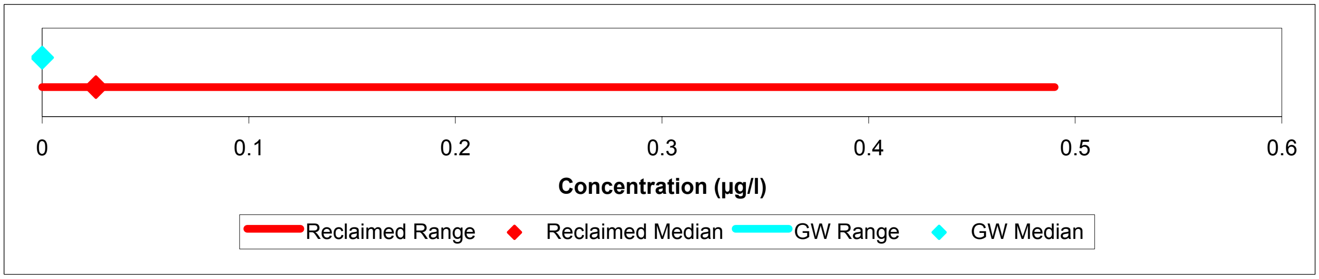


Recycled Water
Minimum: 0
Maximum: 0.27
Median: 0.0075
Mean: 0.0318
Count: 12
Detect Frequency: 67%

Groundwater
Minimum: 0
Maximum: 0.5
Median: 0
Mean: 0.05
Count: 10
Detect Frequency: 10.0%

GROUNDWATER AND RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

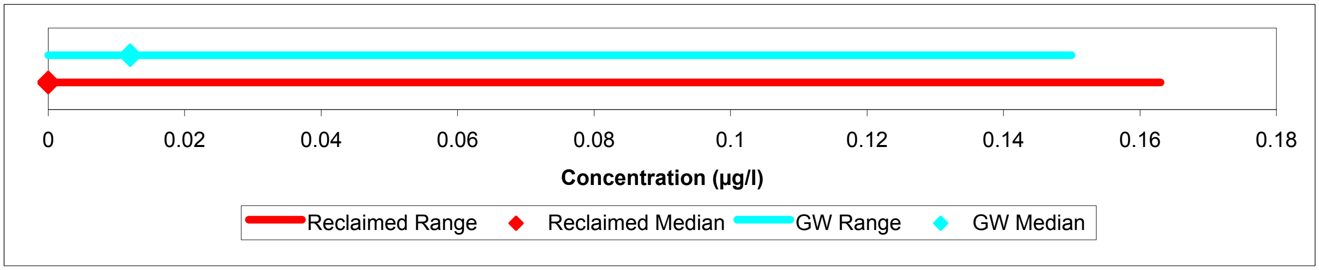
N-Nitroso dimethylamine (NDMA)



Reclaimed Water
Minimum: 0
Maximum: 0.49
Median: 0.026
Mean: 0.091453
Count: 15
Detect Frequency: 93%

Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 17
Detect Frequency: 0.0%

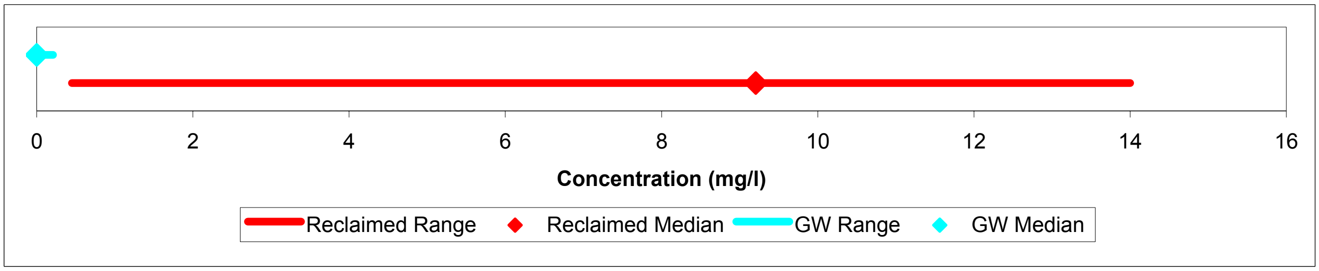
NP/OP



Reclaimed Water
Minimum: 0
Maximum: 0.163
Median: 0
Mean: 0.0272
Count: 15
Detect Frequency: 40%

Groundwater
Minimum: 0.012
Maximum: 0.15
Median: 0.012
Mean: 0.0323
Count: 15
Detect Frequency: 66.7%

Phosphate

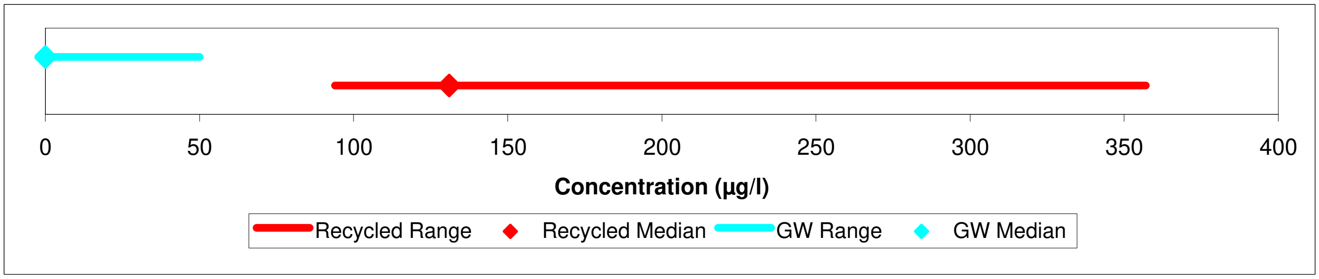


Reclaimed Water
Minimum: 0.45
Maximum: 14
Median: 9.205
Mean: 7.943
Count: 18
Detect Frequency: 100%

Groundwater
Minimum: 0
Maximum: 0.21
Median: 0
Mean: 0.0395
Count: 19
Detect Frequency: 36.8%

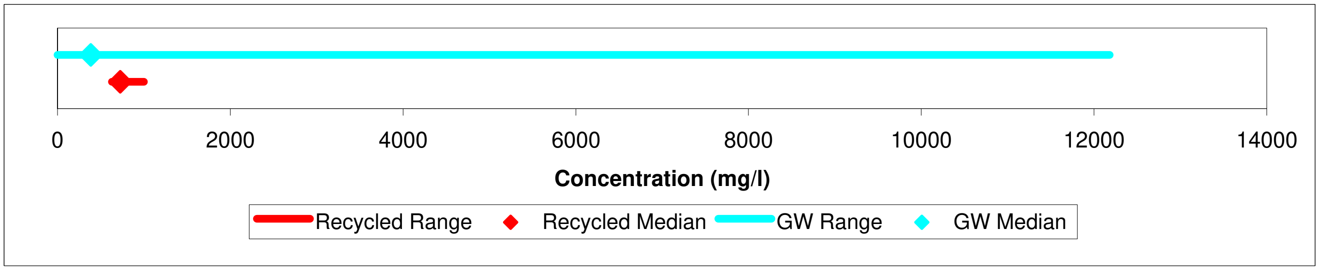
GROUNDWATER AND RECYCLED WATER CHEMISTRY
SUMMARY STATISTICS

Surfactants



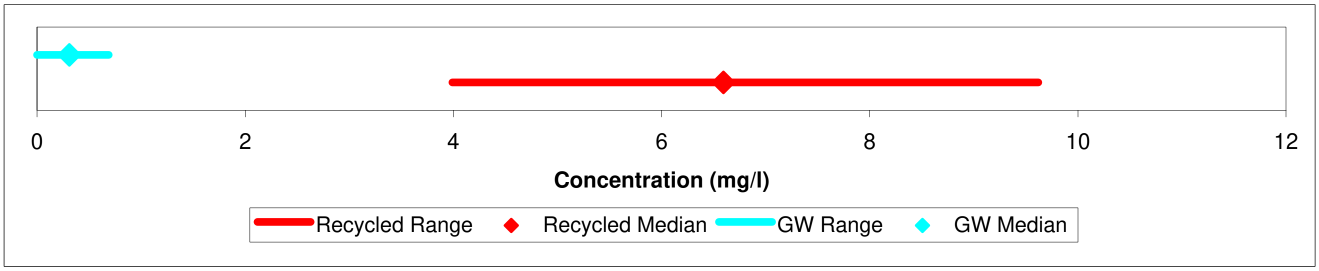
Recycled Water	Groundwater
Minimum: 94	Minimum: 0
Maximum: 357	Maximum: 50
Median: 131	Median: 0
Mean: 162	Mean: 0.0856536
Count: 14	Count: 2356
Detect Frequency: 100%	Detect Frequency: 7.3%

Total Filterable Residue at 180C (Total Dissolved Solids)



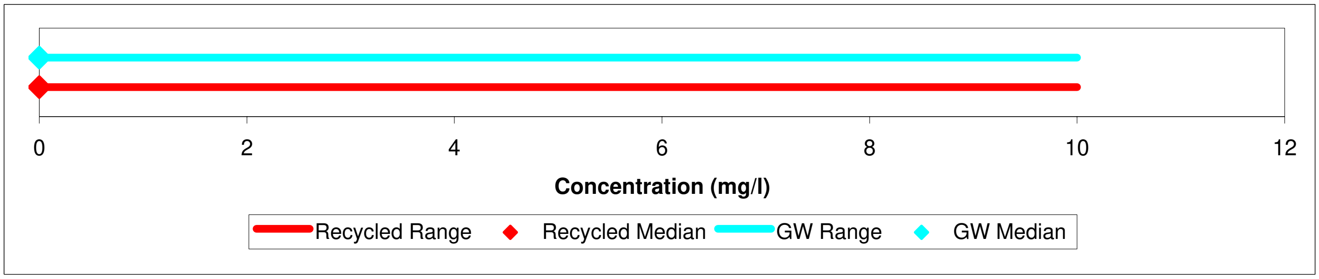
Recycled Water	Groundwater
Minimum: 630	Minimum: 0
Maximum: 1000	Maximum: 12180
Median: 724.5	Median: 384.5
Mean: 752.1	Mean: 456.59
Count: 20	Count: 3872
Detect Frequency: 100%	Detect Frequency: 99.9%

Total Organic Carbon



Recycled Water	Groundwater
Minimum: 3.99	Minimum: 0
Maximum: 9.62	Maximum: 0.69
Median: 6.595	Median: 0.31
Mean: 6.63	Mean: 0.319
Count: 18	Count: 19
Detect Frequency: 100%	Detect Frequency: 78.9%

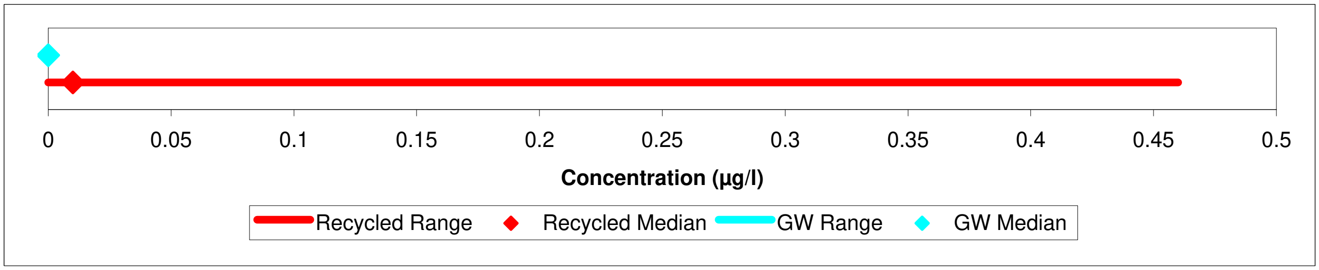
Total Suspended Solids



Recycled Water
Minimum: 0
Maximum: 10
Median: 0
Mean: 2.167
Count: 18
Detect Frequency: 44%

Groundwater
Minimum: 0
Maximum: 10
Median: 0
Mean: 3.737
Count: 19
Detect Frequency: 42.1%

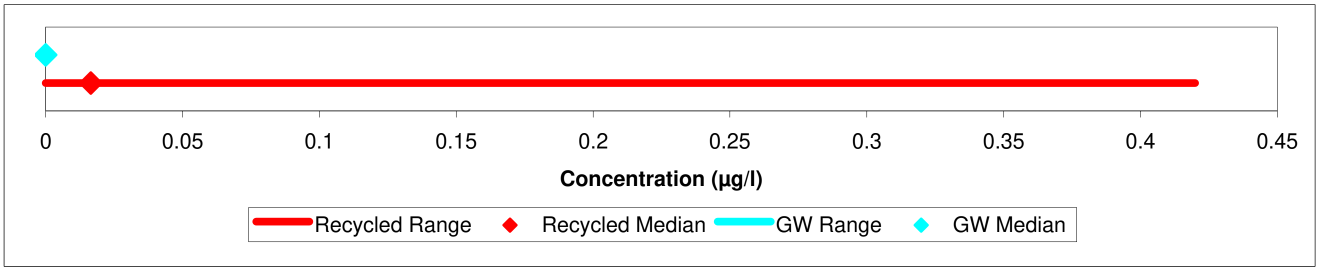
Tris(2,3-dichloropropyl)phosphate



Recycled Water
Minimum: 0
Maximum: 0.46
Median: 0.01
Mean: 0.0841
Count: 12
Detect Frequency: 92%

Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 10
Detect Frequency: 0.0%

Tris(3-chloropropyl)phosphate

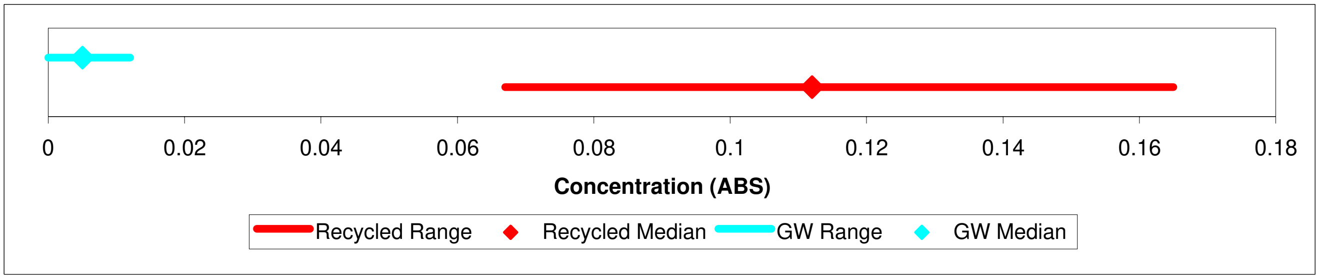


Recycled Water
Minimum: 0
Maximum: 0.42
Median: 0.0165
Mean: 0.0684
Count: 12
Detect Frequency: 92%

Groundwater
Minimum: 0
Maximum: 0
Median: 0
Mean: 0
Count: 10
Detect Frequency: 0.0%

GROUNDWATER AND RECYCLED WATER CHEMISTRY
SUMMARY STATISTICS

UV-254



Recycled Water	Groundwater
Minimum: 0.067	Minimum: 0
Maximum: 0.165	Maximum: 0.012
Median: 0.112	Median: 0.005
Mean: 0.1058	Mean: 0.0051
Count: 19	Count: 19
Detect Frequency: 100%	Detect Frequency: 84.2%

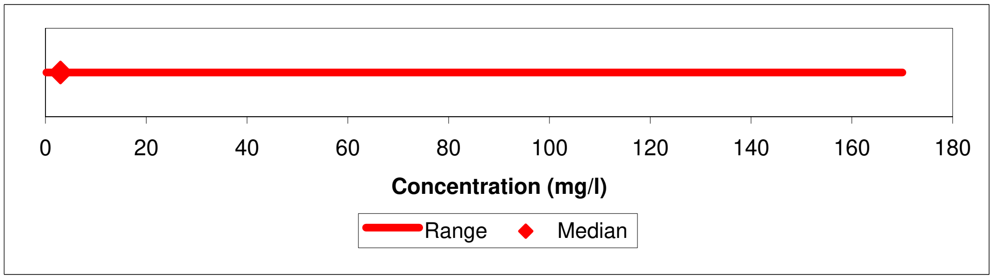
APPENDIX I-C

BOX PLOTS FOR ADDITIONAL RECLAIMED WATER CONSTITUENTS

RECYCLED WATER CHEMISTRY
SUMMARY STATISTICS

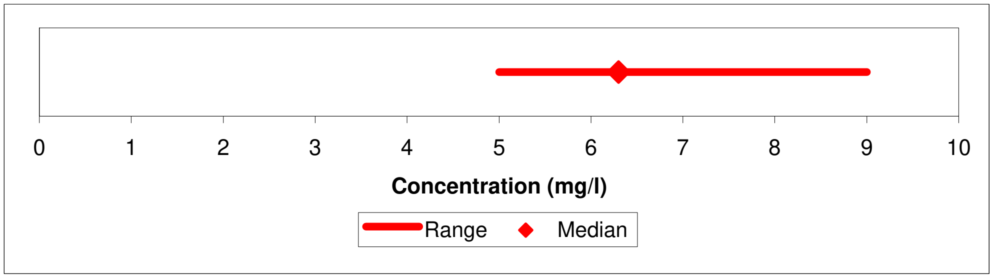
Chlorine, Total

Minimum: 0.2
Maximum: 170
Median: 3
Mean: 35.9
Count: 5
Detect Frequency: 100%



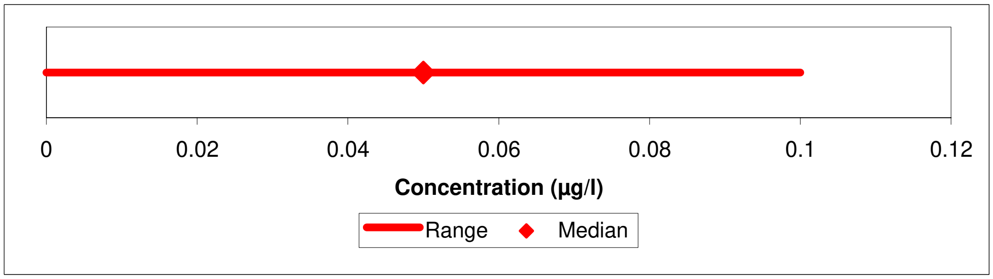
Dissolved Organic Carbon

Minimum: 5
Maximum: 9
Median: 6.3
Mean: 6.56
Count: 5
Detect Frequency: 100%



Terbuthylazine

Minimum: 0
Maximum: 0.1
Median: 0.05
Mean: 0.05
Count: 4
Detect Frequency: 50%



TABLES

TABLE I-2-1
LIST OF CHEMICALS ANALYZED IN RECYCLED WATER SAMPLES

Constituent	Data Presented in	Category
1,1,1,2-Tetrachloroethane	No detections, not plotted	
1,1,1-Trichloroethane	No detections, not plotted	
1,1,2,2-Tetrachloroethane	No detections, not plotted	
1,1,2-Trichloroethane	No detections, not plotted	
1,1-Dichloroethane	No detections, not plotted	
1,1-Dichloroethene	No detections, not plotted	
1,1-Dichloropropane	No detections, not plotted	
1,1-Dichloropropene	No detections, not plotted	
1,2,3-Trichlorobenzene	No detections, not plotted	
1,2,3-Trichloropropane	No detections, not plotted	
1,2,4-Trichlorobenzene	No detections, not plotted	
1,2,4-Trimethylbenzene	No detections, not plotted	
1,2-Dichlorobenzene	No detections, not plotted	
1,2-Dichloroethane	No detections, not plotted	
1,2-Dichloropropane	No detections, not plotted	
1,3,5-Trimethylbenzene	No detections, not plotted	
1,3-Dichlorobenzene	No detections, not plotted	
1,3-Dichloropropane	No detections, not plotted	
1,3-Dichloropropene	No detections, not plotted	
1,4-Dichlorobenzene	No detections, not plotted	
1,4-Dioxane	No detections, not plotted	
17β-Estradiol	No detections, not plotted	
2,2-Dichloropropane	No detections, not plotted	
2,3,7,8-TCDD	No detections, not plotted	
2,4,5-TP	No detections, not plotted	
2,4-D	No detections, not plotted	
2,4-Dinitrotoluene	No detections, not plotted	
2,6-Dinitrotoluene	No detections, not plotted	
2-Chlorotoluene	No detections, not plotted	
3-Hydroxycarbofuran	No detections, not plotted	
4,4'-DDD	No detections, not plotted	
4,4'-DDE	No detections, not plotted	
4,4'-DDT	No detections, not plotted	
4-Chlorotoluene	No detections, not plotted	
4-Isopropyltoluene	No detections, not plotted	
Acenaphthene	No detections, not plotted	
Acenaphthylene	No detections, not plotted	
Acetaminophen	No detections, not plotted	
Acetochlor	No detections, not plotted	
Aciflurfen	No detections, not plotted	
Alachlor	No detections, not plotted	
Aldicarb (Temik)	No detections, not plotted	
Aldicarb sulfone	No detections, not plotted	
Aldicarb sulfoxide	Appendix A	E
Aldrin	No detections, not plotted	
Alkalinity, Total	Appendix A	B
Alkylphenol Di-ethoxylate (AP2EO)	Appendix B	C
Alkylphenol Ethoxycarboxylate (APEC) m/z 235	Appendix B	C
Alkylphenol Ethoxycarboxylate (APEC) m/z 249	Appendix B	C
Alkylphenol Ethoxycarboxylate (APEC) m/z 279	Appendix B	C
Alkylphenol Ethoxycarboxylate (APEC), Halogenated	Appendix B	C
Alkylphenol Ethoxycarboxylate (APEC), Total	Appendix B	C
Alkylphenol ethoxylate (APEO), Total	Appendix B	C
Alkylphenol Mono-ethoxylate (AP1EO)	Appendix B	C
Alkylphenol Tri-ethoxylate (AP3EO)	Appendix B	C

TABLE I-2-1
LIST OF CHEMICALS ANALYZED IN RECYCLED WATER SAMPLES

Constituent	Data Presented in	Category
Alkylphenol/Alkylphenolethoxylates (AP/APEO), Halogenated	Appendix B	C
Alpha, Gross	Appendix A	D
Alpha-BHC	No detections, not plotted	
Alpha-chlordane	No detections, not plotted	
Aluminum	Appendix A	D
Anthracene	No detections, not plotted	
Antimony	No detections, not plotted	
Arsenic	No detections, not plotted	
Atrazine	No detections, not plotted	
Barium	No detections, not plotted	
Baygon (Propoxur)	No detections, not plotted	
Bentazon	No detections, not plotted	
Benz(a)Anthracene	No detections, not plotted	
Benzene	No detections, not plotted	
Benzo(a)pyrene	No detections, not plotted	
Benzo(b)Fluoranthene	No detections, not plotted	
Benzo(g,h,i)Perylene	No detections, not plotted	
Benzo(k)Fluoranthene	No detections, not plotted	
Beryllium	No detections, not plotted	
Beta, Gross	Appendix A	D
Beta-BHC	No detections, not plotted	
Bicarbonate Alkalinity	Appendix A	B
Bisphenol-A (BPA)	No detections, not plotted	
Boron	Appendix A	C
Bromacil	No detections, not plotted	
Bromate	Appendix B	D
Bromobenzene	No detections, not plotted	
Bromochloroacetic Acid	Appendix B	E
Bromochloromethane	No detections, not plotted	
Bromodichloromethane	Appendix A	C
Bromoform	Appendix A	C
Bromomethane	No detections, not plotted	
Butachlor	No detections, not plotted	
Butylbenzylphalate	No detections, not plotted	
Cadmium	Appendix A	D
Caffeine	Appendix B	E
Calcium	Appendix A	A
Carabaryl	No detections, not plotted	
Carbamazepine	Appendix B	E
Carbofuran (Furadan)	No detections, not plotted	
Carbon Tetrachloride	Appendix A	D
Carbonate Alkalinity	No detections, not plotted	
Carisoprodol	Appendix B	E
Chlordane	No detections, not plotted	
Chloride	Appendix A	A
Chlorine, Total	Appendix C	E
Chlorobenzene	No detections, not plotted	
Chlorobenzilate	No detections, not plotted	
Chloroethane	No detections, not plotted	
Chloroform	Appendix A	C
Chloromethane	No detections, not plotted	
Chloroneb	No detections, not plotted	
Chlorpyrifos (Dursban)	No detections, not plotted	
Chlorthalonil (Draconil, Bravo)	No detections, not plotted	
Chromium	No detections, not plotted	

TABLE I-2-1
LIST OF CHEMICALS ANALYZED IN RECYCLED WATER SAMPLES

Constituent	Data Presented in	Category
Chromium, Hexavalent	No detections, not plotted	
Chrysene	No detections, not plotted	
cis-1,2-Dichloroethene	No detections, not plotted	
cis-1,3-Dichloropropene	No detections, not plotted	
Clostridium Perfringens	No data, not tested for	E
Coliforms, Total	Appendix B	E
Conductivity	Not enough data, not plotted	
Copper	Appendix A	D
Cryptosporidium Oocysts	Appendix B	E
Cyanide	Appendix A	C
Dalapon	No detections, not plotted	
Delta-BHC	No detections, not plotted	
Di(2-ethylhexyl)adipate	No detections, not plotted	
Di(2-ethylhexyl)phthalate (DEHP)	Appendix A	D
Diazinon	No detections, not plotted	
Dibenz(a,h)Anthracene	No detections, not plotted	
Dibromoacetic Acid	Appendix A	E
Dibromochloromethane	Appendix A	C
Dibromochloropropane (DBCP)	No detections, not plotted	
Dibromomethane	No detections, not plotted	
Dicamba	No detections, not plotted	
Dichloroacetic Acid	Appendix A	E
Dichlorodifluoromethane	No detections, not plotted	
Dichlorovos (DDVP)	No detections, not plotted	
Dieldrin	No detections, not plotted	
Diethylphthalate	No detections, not plotted	
Diisopropyl Ether (DIPE)	No detections, not plotted	
Dimethoate	No detections, not plotted	
Dimethylphthalate	No detections, not plotted	
Di-N-Butylphthalate	No detections, not plotted	
Di-N-Octylphthalate	No detections, not plotted	
Dinoseb	No detections, not plotted	
Diquat	No detections, not plotted	
Dissolved Organic Carbon	Appendix C	A
Dissolved Oxygen	No data, not tested for	B
E. Coli	Appendix B	E
Endosulfan I (alpha)	No detections, not plotted	
Endosulfan II (beta)	No detections, not plotted	
Endosulfan sulfate	No detections, not plotted	
Endothall	No detections, not plotted	
Endrin	No detections, not plotted	
Endrin Aldehyde	No detections, not plotted	
Estradiol	No detections, not plotted	
Estriol	No detections, not plotted	
Estrone	Appendix B	D
Ethyl tert-Butyl Ether (ETBE)	No detections, not plotted	
Ethylbenzene	No detections, not plotted	
Ethylene Dibromide (EDB)	No detections, not plotted	
Ethylenediaminetetraacetic acid (EDTA)	Appendix B	C
Ethynylestradiol	No detections, not plotted	
Fecal Coliforms	Appendix B	E
Fluorene	No detections, not plotted	
Fluoride	Appendix A	D
Fluoroanthene	No detections, not plotted	
gamma-Chlordane	No detections, not plotted	

TABLE I-2-1
LIST OF CHEMICALS ANALYZED IN RECYCLED WATER SAMPLES

Constituent	Data Presented in	Category
Gemfibrozil	Appendix B	E
Giardia	Appendix B	E
Glyphosate	No detections, not plotted	
Haloacetic Acids (5), Total	Appendix B	E
Hardness	Appendix A	D
Heptachlor	No detections, not plotted	
Heptachlor Epoxide	Appendix A	D
Heptachlor Epoxide (isomer A)	No detections, not plotted	
Heptachlor Epoxide (isomer B)	No detections, not plotted	
Heterotrophic Plate Count	Appendix B	E
Hexachlorobenzene	No detections, not plotted	
Hexachlorobutadiene	No detections, not plotted	
Hexachlorocyclopentadiene	Appendix A	D
Hydroxide Alkalinity	No detections, not plotted	
Ibuprofen	Appendix B	E
Iminostilbene	No detections, not plotted	
Indeno(1,2,3,c,d)pyrene	No detections, not plotted	
Iron	Appendix A	D
Isophorone	No detections, not plotted	
Isopropylbenzene	No detections, not plotted	
Ketoprofen	No detections, not plotted	
Lead	Appendix A	D
Legionella Direct Isolation	No quantifiable results	
Lindane (gamma-BHC)	Appendix A	D
Magnesium	Appendix A	A
Malathion	No detections, not plotted	
Manganese	Appendix A	D
Medroxyprogesterone	No detections, not plotted	
Mercury	No detections, not plotted	
Methiocarb	No detections, not plotted	
Methomyl	No detections, not plotted	
Methoxychlor	No detections, not plotted	
Methyl Ethyl Ketone (MEK)	No detections, not plotted	
Methyl Isobutyl Ketone	No detections, not plotted	
Methyl tert-Butyl Ether (MTBE)	No detections, not plotted	
Methylene Chloride	No detections, not plotted	
Metolachlor	No detections, not plotted	
Metribuzin	No detections, not plotted	
Molinate	No detections, not plotted	
Monobromoacetic Acid	Appendix B	E
Monochloroacetic Acid	Appendix B	E
Naphthalene	No detections, not plotted	
Naphthalenedicarboxylic acids (NDCs)	No data, not tested for	E
Naproxen	Appendix B	E
N-Butyl Benzenesulfonamide (NBBS)	Appendix B	E
N-Butylbenzene	No detections, not plotted	
Nickel	Appendix A	D
Nitrate	Appendix A	C
Nitrilotriacetic acid (NTA)	No data, not tested for	C
Nitrite	Appendix A	C
Nitrobenzene	No detections, not plotted	
N-Nitroso Dimethylamine (NDMA)	Appendix B	C
Nonylphenol/Octylphenol (NP/OP)	Appendix B	C
ORP	No data, not tested for	B
Oxamyl (Vydate)	No detections, not plotted	

TABLE I-2-1
LIST OF CHEMICALS ANALYZED IN RECYCLED WATER SAMPLES

Constituent	Data Presented in	Category
Paraquat	No detections, not plotted	
Parathion	No detections, not plotted	
PCB 1016 Aroclor	No detections, not plotted	
PCB 1221 Aroclor	No detections, not plotted	
PCB 1232 Aroclor	No detections, not plotted	
PCB 1242 Aroclor	No detections, not plotted	
PCB 1248 Aroclor	No detections, not plotted	
PCB 1254 Aroclor	No detections, not plotted	
PCB 1260 Aroclor	No detections, not plotted	
PCBs, Total	No detections, not plotted	
Pendimethalin	No detections, not plotted	
Pentachlorophenol	No detections, not plotted	
Perchlorate	Appendix A	A
Perfluorochemicals	No data, not tested for	E
Permethrin (mixed isomers)	No detections, not plotted	
pH	Appendix A	B
Phenanthrene	No detections, not plotted	
Phosphate	Appendix B	C
Picloram	No detections, not plotted	
p-Isopropyltoluene	No detections, not plotted	
Primidone	No detections, not plotted	
Prometryn	No detections, not plotted	
Propachlor	No detections, not plotted	
Propanolol	No detections, not plotted	
Propylbenzene	No detections, not plotted	
Pyrene	No detections, not plotted	
Radium 226	No detections, not plotted	
Radium 228	Appendix A	D
Radon 222	No detections, not plotted	
sec-Butylbenzene	No detections, not plotted	
Selenium	No detections, not plotted	
S-Ethyl dipropylthiocarbamate (EPTC)	No detections, not plotted	
Silica	Appendix A	D
Silver	No detections, not plotted	
Simazine	No detections, not plotted	
Sodium	Appendix A	A
Strontium 90	No detections, not plotted	
Styrene	No detections, not plotted	
Sulfate	Appendix A	A
Surfactants	Appendix B	C
Terbacil	No detections, not plotted	
Terbuthylazine	Appendix C	C
tert-Amyl Methyl Ether (TAME)	No detections, not plotted	
tert-Butyl Alcohol	No detections, not plotted	
tert-Butylbenzene	No detections, not plotted	
Testosterone	No detections, not plotted	
Tetrachloroethene	No detections, not plotted	
Thallium	No detections, not plotted	
Thiobencarb	No detections, not plotted	
Toluene	No detections, not plotted	
Total Culturable Virus Assay	No detections, not plotted	
Total Filterable Residue at 180C (TDS)	Appendix B	A
Total Organic Carbon (TOC)	Appendix B	A
Total Suspended Solids (TSS)	Appendix B	D
Toxaphene	No detections, not plotted	

TABLE I-2-1
LIST OF CHEMICALS ANALYZED IN RECYCLED WATER SAMPLES

Constituent	Data Presented in	Category
trans-1,2-Dichloroethene	No detections, not plotted	
trans-1,3-Dichloropropene	No detections, not plotted	
trans-Nonachlor	No detections, not plotted	
Trichloroacetic Acid	Appendix A	E
Trichloroethene	No detections, not plotted	
Trichlorofluoroethane	No detections, not plotted	
Trichlorofluoromethane	No detections, not plotted	
Trifluralin	No detections, not plotted	
Trihalomethanes, Total	Appendix A, plotted individually	C
Tris(2,3-dichloropropyl)phosphate	Appendix B	E
Tris(3-chloropropyl)phosphate	Appendix B	E
Turbidity	Appendix A	D
Uranium	No detections, not plotted	
UV-254	Appendix B	A
Vinyl Chloride	No detections, not plotted	
Viruses	No detections, not plotted	D
Xylenes, Total	Appendix A	D
Zinc	Appendix A	D

Notes:
A - Significant Potential for Impact; Include for Monitoring
B - Important Parameter; Include for Monitoring
C - Inconclusive; Include for Monitoring
D - Minimum Potential for Impact; Omit from Monitoring
E - Insufficient Information; Include for Monitoring

Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	PARWQCP	PARWQCP	PARWQCP	PARWQCP	PARWQCP	PARWQCP	PARWQCP	SCRWA	SCRWA
	Date	30-Jul-2002	14-Nov-2002	25-Jan-2005	26-Jan-2005	5-Apr-2005	26-Jun-2007	2-Jul-2007	29-Nov-2001	3-Dec-2001
Parameter	Units									
Cations and Anions										
Boron	µg/L	321	NT	NT	344	NT	328	NT	207	NT
Calcium as CaCO3	mg/L	112	NT	NT	126	NT	109	NT	102	NT
Calcium	mg/L	45	NT	NT	51	NT	45	NT	41	NT
Chloride	mg/L	270	NT	NT	320	NT	274	NT	170	NT
Chlorine Total by DPD	mg/L	NT	NT	NT	NT	3.8	NT	NT	170	NT
Cyanide	µg/L	ND	NT	NT	NT	NT	ND	NT	NT	NT
Fluoride	mg/L	0.77	NT	NT	0.65	NT	0.87	NT	NT	NT
Sodium	mg/L	209	NT	NT	230	NT	206	NT	147	NT
Sulfate	mg/L	91	NT	NT	104	NT	95	NT	73	NT
Disinfection Byproducts										
Bromate	µg/L	ND	NT	NT	ND	NT	ND	NT	NT	NT
N-Nitroso dimethylamine (NDMA)	µg/L	0.49	0.23	NT	NT	NT	0.063	NT	NT	NT
General Water Quality										
Alkalinity, Total	mg/L	88	NT	NT	110	NT	65	NT	226	NT
Bicarbonate Alkalinity	mg/L	107	NT	NT	110	NT	77	NT	226	NT
Dissolved Organic Carbon	mg/L	NT	NT	NT	NT	NT	6.3	NT	NT	NT
Hardness as CaCO3	mg/L	232	NT	NT	261	NT	244	NT	NT	NT
pH	pH units	7.0	NT	NT	6.7	7.1	7.6	NT	7.4	NT
Silica	mg/L	7.0	NT	NT	15	NT	14	NT	NT	NT
Total Filterable Residue at 180C	mg/L	840	NT	NT	890	NT	862	NT	660	NT
Total Organic Carbon	mg/L	7.1	NT	NT	5.9	NT	5.6	NT	NT	NT
Total Suspended Solids	mg/L	0.0	NT	NT	0.0	NT	1.0	NT	NT	NT
Turbidity	NTU	0.67	NT	NT	0.89	NT	0.51	NT	NT	NT
UV-254	ABS	0.11	NT	NT	0.12	NT	0.11	NT	NT	NT

Notes:

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SWPCP - Sunnyvale Water Pollution Control Plant

Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	PARWQCP	PARWQCP	PARWQCP	PARWQCP	PARWQCP	PARWQCP	PARWQCP	SCRWA	SCRWA
	Date	30-Jul-2002	14-Nov-2002	25-Jan-2005	26-Jan-2005	5-Apr-2005	26-Jun-2007	2-Jul-2007	29-Nov-2001	3-Dec-2001
Parameter	Units									
Haloacetic Acids										
Bromochloroacetic Acid	µg/L	30	NT	NT	12	NT	NT	NT	NT	ND
Dibromoacetic Acid	µg/L	30	NT	NT	21	NT	23	NT	NT	ND
Dichloroacetic Acid	µg/L	23	NT	NT	7.0	NT	14	NT	NT	1.0
Haloacetic Acids (5)	µg/L	91	NT	NT	33	NT	58	NT	NT	61
Monobromoacetic Acid	µg/L	6.9	NT	NT	1.7	NT	3.8	NT	NT	ND
Monochloroacetic Acid	µg/L	2.2	NT	NT	ND	NT	NT	NT	NT	ND
Trichloroacetic Acid	µg/L	29	NT	NT	3.1	NT	18	NT	NT	60
Hormones										
Estrone	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Estrone	µg/L	NT	NT	NT	ND	NT	NT	ND	NT	NT
Industrial Chemicals										
Carbon Tetrachloride	µg/L	ND	NT	NT	ND	ND	ND	NT	NT	NT
Di (2-Ethylhexyl) phthalate	µg/L	ND	NT	NT	NT	NT	ND	NT	NT	NT
EDTA	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Hexachlorocyclopentadiene	µg/L	ND	NT	NT	NT	NT	ND	NT	NT	NT
NBBS	µg/L	NT	NT	NT	0.010	NT	NT	ND	NT	NT
Perchlorate	µg/L	ND	NT	NT	4.3	NT	ND	NT	NT	NT
Xylenes, Total	µg/L	ND	NT	NT	ND	0.0	ND	NT	NT	NT
Metals										
Aluminum	µg/L	83	NT	NT	ND	NT	ND	NT	NT	NT
Cadmium	µg/L	ND	NT	NT	ND	NT	ND	NT	NT	NT
Copper	µg/L	ND	NT	NT	ND	NT	ND	NT	NT	NT
Iron	µg/L	ND	NT	NT	ND	NT	ND	NT	NT	NT
Lead	µg/L	ND	NT	NT	ND	NT	ND	NT	NT	NT
Magnesium	mg/L	33	NT	NT	40	NT	31	NT	27	NT
Manganese	µg/L	ND	NT	NT	ND	NT	26	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	PARWQCP 30-Jul-2002	PARWQCP 14-Nov-2002	PARWQCP 25-Jan-2005	PARWQCP 26-Jan-2005	PARWQCP 5-Apr-2005	PARWQCP 26-Jun-2007	PARWQCP 2-Jul-2007	SCRWA 29-Nov-2001	SCRWA 3-Dec-2001
Metals										
Nickel	µg/L	ND	NT	NT	ND	NT	ND	NT	NT	NT
Zinc	µg/L	ND	NT	NT	ND	NT	ND	NT	NT	NT
Nutrients										
Nitrate as NO3	mg/L	85	NT	NT	106	NT	122	NT	2.1	NT
Nitrite as N	mg/L	0.0	NT	NT	ND	NT	ND	NT	NT	NT
Phosphate	mg/L	11	NT	NT	14	NT	14	NT	NT	NT
Organophosphates										
Tris(2,3-dichloropropyl)phosphate	µg/L	NT	NT	NT	0.010	NT	NT	0.15	NT	NT
Tris(3-chloropropyl)phosphate	µg/L	NT	NT	NT	0.050	NT	NT	0.42	NT	NT
Pathogens										
Coliforms, Total	MPN/100ml	0.0	NT	NT	2.0	NT	4.0	NT	NT	NT
Cryptosporidium Oocysts	oocysts/L	0.20	NT	NT	0.70	NT	ND	NT	NT	NT
E. Coli	MPN/100ml	0.0	NT	NT	0.0	NT	ND	NT	NT	NT
Fecal Coliforms	MPN/100ml	0.0	NT	NT	0.0	NT	ND	NT	NT	NT
Giardia	cysts/L	0.0	NT	NT	3.8	NT	ND	NT	NT	NT
Heterotrophic Plate Count by R2A	CFU/mL	2.0	NT	NT	170	NT	5700	NT	NT	NT
Legionella	NA	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Culturable Virus Assay	MPN/100 L	ND	NT	NT	NT	NT	NT	NT	NT	NT
Pesticides										
Aldicarb Sulfoxide	µg/L	ND	NT	NT	NT	NT	ND	NT	NT	NT
Heptachlor Epoxide	µg/L	ND	NT	NT	NT	NT	ND	NT	NT	NT
Lindane (gamma-BHC)	µg/L	ND	NT	NT	NT	NT	ND	NT	NT	NT
Terbuthylazine	µg/L	NT	NT	NT	NT	NT	0.10	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	PARWQCP	PARWQCP	PARWQCP	PARWQCP	PARWQCP	PARWQCP	PARWQCP	SCRWA	SCRWA
	Date	30-Jul-2002	14-Nov-2002	25-Jan-2005	26-Jan-2005	5-Apr-2005	26-Jun-2007	2-Jul-2007	29-Nov-2001	3-Dec-2001
Parameter	Units									
Pharmaceutically Active Compounds										
Caffeine	µg/L	ND	NT	NT	ND	NT	ND	ND	NT	NT
Carbamazepine	µg/L	NT	NT	NT	0.050	NT	NT	ND	NT	NT
Carisoprodol	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
Gemfibrozil	µg/L	NT	NT	NT	ND	NT	NT	ND	NT	NT
Ibuprofen	µg/L	NT	NT	NT	ND	NT	NT	0.15	NT	NT
Naproxen	µg/L	NT	NT	NT	ND	NT	NT	ND	NT	NT
Radioactives										
Alpha Gross	pCi/L	4.0	NT	NT	NT	NT	0.0	NT	NT	NT
Beta Gross	pCi/L	10	NT	NT	NT	NT	9.4	NT	NT	NT
Radium 228	pCi/L	NT	NT	NT	NT	NT	1.1	NT	NT	NT
Surfactants										
AP/APEO, Halogenated	µg/L	NT	NT	NT	ND	NT	NT	ND	NT	NT
AP1EO	µg/L	NT	NT	ND	NT	NT	NT	ND	NT	NT
AP2EO	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
AP3EO	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
APEC m/z 235	µg/L	NT	NT	NT	NT	NT	NT	1.1	NT	NT
APEC m/z 249	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
APEC m/z 279	µg/L	NT	NT	NT	NT	NT	NT	1.5	NT	NT
APEC Total	µg/L	NT	NT	NT	0.70	NT	NT	2.6	NT	NT
APEC, Halogenated	µg/L	NT	NT	0.040	NT	NT	NT	2.7	NT	NT
APEO Total	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
NP/OP	µg/L	NT	NT	NT	0.050	NT	NT	ND	NT	NT
Surfactants	µg/L	130	NT	NT	NT	NT	120	NT	NT	NT
Trihalomethanes										
Bromodichloromethane	µg/L	64	NT	NT	14	46	40	NT	NT	NT
Bromoform	µg/L	51	NT	NT	41	61	19	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	PARWQCP 30-Jul-2002	PARWQCP 14-Nov-2002	PARWQCP 25-Jan-2005	PARWQCP 26-Jan-2005	PARWQCP 5-Apr-2005	PARWQCP 26-Jun-2007	PARWQCP 2-Jul-2007	SCRWA 29-Nov-2001	SCRWA 3-Dec-2001
Trihalomethanes										
Chloroform	µg/L	22	NT	NT	2.7	16	14	NT	NT	NT
Dibromochloromethane	µg/L	100	NT	NT	39	86	63	NT	NT	NT
Trihalomethanes, Total	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SCRWA 30-Oct-2001	SCRWA 1-Nov-2001	SCRWA 26-Mar-2002	SCRWA 21-May-2002	SCRWA 30-May-2002	SCRWA 30-Jul-2002	SCRWA 13-Aug-2002	SCRWA 25-Jan-2005	SCRWA 6-Apr-2005
Cations and Anions										
Boron	µg/L	447	NT	443	NT	NT	358	NT	363	NT
Calcium as CaCO3	mg/L	90	NT	123	NT	NT	124	NT	134	NT
Calcium	mg/L	48	NT	49	NT	NT	50	NT	54	NT
Chloride	mg/L	166	NT	150	NT	NT	168	NT	119	NT
Chlorine Total by DPD	mg/L	NT	NT	NT	NT	NT	NT	NT	NT	3.0
Cyanide	µg/L	5	NT	ND	NT	NT	ND	NT	NT	NT
Fluoride	mg/L	0.15	NT	0.21	NT	NT	0.21	NT	0.41	NT
Sodium	mg/L	128	NT	138	NT	NT	141	NT	118	NT
Sulfate	mg/L	62	NT	66	NT	NT	60	NT	76	NT
Disinfection Byproducts										
Bromate	µg/L	3.0	NT	ND	NT	NT	3.0	NT	ND	NT
N-Nitroso dimethylamine (NDMA)	µg/L	0.0055	NT	ND	NT	NT	0.004	NT	NT	NT
General Water Quality										
Alkalinity, Total	mg/L	245	NT	250	NT	NT	247	NT	263	NT
Bicarbonate Alkalinity	mg/L	299	NT	299	NT	NT	301	NT	263	NT
Dissolved Organic Carbon	mg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Hardness as CaCO3	mg/L	224	NT	180	NT	NT	232	NT	230	NT
pH	pH units	7.6	NT	7.5	NT	NT	7.6	NT	7.3	7.5
Silica	mg/L	32	NT	31	NT	NT	16	NT	35	NT
Total Filterable Residue at 180C	mg/L	670	NT	630	NT	NT	660	NT	640	NT
Total Organic Carbon	mg/L	5.0	NT	5.5	NT	NT	5.3	NT	4.0	NT
Total Suspended Solids	mg/L	10	NT	0.0	NT	NT	0.0	NT	0.0	NT
Turbidity	NTU	0.19	NT	0.25	NT	NT	0.41	NT	0.23	NT
UV-254	ABS	0.074	NT	0.070	NT	NT	0.083	NT	0.067	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SCRWA 30-Oct-2001	SCRWA 1-Nov-2001	SCRWA 26-Mar-2002	SCRWA 21-May-2002	SCRWA 30-May-2002	SCRWA 30-Jul-2002	SCRWA 13-Aug-2002	SCRWA 25-Jan-2005	SCRWA 6-Apr-2005
Haloacetic Acids										
Bromochloroacetic Acid	µg/L	NT	NT	NT	NT	NT	15	NT	20	NT
Dibromoacetic Acid	µg/L	NT	NT	NT	NT	NT	1.6	NT	4.1	NT
Dichloroacetic Acid	µg/L	NT	NT	NT	NT	NT	79	NT	75	NT
Haloacetic Acids (5)	µg/L	NT	NT	NT	NT	NT	197	NT	176	NT
Monobromoacetic Acid	µg/L	NT	NT	NT	NT	NT	2.0	NT	2.0	NT
Monochloroacetic Acid	µg/L	NT	NT	NT	NT	NT	13	NT	7.7	NT
Trichloroacetic Acid	µg/L	NT	NT	NT	NT	NT	101	NT	87	NT
Hormones										
Estrone	µg/L	NT	0.011	NT	NT	NT	NT	NT	NT	NT
Estrone	µg/L	NT	NT	NT	NT	NT	NT	NT	ND	NT
Industrial Chemicals										
Carbon Tetrachloride	µg/L	ND	NT	NT	ND	NT	ND	NT	NT	NT
Di (2-Ethylhexyl) phthalate	µg/L	ND	NT	ND	NT	NT	ND	NT	NT	NT
EDTA	µg/L	NT	11	274	NT	NT	NT	NT	NT	NT
Hexachlorocyclopentadiene	µg/L	ND	NT	ND	NT	NT	ND	NT	NT	NT
NBBS	µg/L	NT	NT	ND	NT	NT	NT	NT	0.0050	NT
Perchlorate	µg/L	ND	NT	ND	NT	NT	ND	NT	ND	NT
Xylenes, Total	µg/L	ND	NT	NT	ND	NT	ND	NT	NT	NT
Metals										
Aluminum	µg/L	100	NT	100	NT	NT	174	NT	ND	NT
Cadmium	µg/L	ND	NT	ND	NT	NT	ND	NT	ND	NT
Copper	µg/L	ND	NT	ND	NT	NT	ND	NT	ND	NT
Iron	µg/L	ND	NT	ND	NT	NT	ND	NT	ND	NT
Lead	µg/L	ND	NT	ND	NT	NT	ND	NT	ND	NT
Magnesium	mg/L	28	NT	32	NT	NT	30	NT	35	NT
Manganese	µg/L	ND	NT	ND	NT	NT	ND	NT	ND	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA
	Date	30-Oct-2001	1-Nov-2001	26-Mar-2002	21-May-2002	30-May-2002	30-Jul-2002	13-Aug-2002	25-Jan-2005	6-Apr-2005
Parameter	Units									
Metals										
Nickel	µg/L	ND	NT	ND	NT	NT	ND	NT	ND	NT
Zinc	µg/L	130	NT	63	NT	NT	61	NT	73	NT
Nutrients										
Nitrate as NO3	mg/L	9.0	NT	7.5	NT	NT	8.0	NT	9.6	NT
Nitrite as N	mg/L	ND	NT	ND	NT	NT	0.0	NT	ND	NT
Phosphate	mg/L	9.7	NT	8.7	NT	NT	4.9	NT	12	NT
Organophosphates										
Tris(2,3-dichloropropyl)phosphate	µg/L	NT	NT	0.010	NT	NT	NT	NT	0.020	NT
Tris(3-chloropropyl)phosphate	µg/L	NT	NT	0.0070	NT	NT	NT	NT	0.030	NT
Pathogens										
Coliforms, Total	MPN/100ml	0.0	NT	0.0	NT	NT	0.0	NT	0.0	NT
Cryptosporidium Oocysts	oocysts/L	0.0	NT	0.0	NT	NT	0.0	NT	0.0	NT
E. Coli	MPN/100ml	0.0	NT	0.0	NT	NT	0.0	NT	0.0	NT
Fecal Coliforms	MPN/100ml	0.0	NT	0.0	NT	NT	0.0	NT	0.0	NT
Giardia	cysts/L	0.0	NT	0.0	NT	NT	0.0	NT	0.0	NT
Heterotrophic Plate Count by R2A	CFU/mL	210	NT	3.0	NT	NT	1.0	NT	0.0	NT
Legionella	NA	NT	ND	NT	ND	NT	NT	ND	NT	NT
Total Culturable Virus Assay	MPN/100 L	NT	ND	ND	NT	NT	NT	ND	NT	NT
Pesticides										
Aldicarb Sulfoxide	µg/L	ND	NT	0.90	NT	ND	ND	NT	NT	NT
Heptachlor Epoxide	µg/L	ND	NT	ND	NT	NT	ND	NT	NT	NT
Lindane (gamma-BHC)	µg/L	0.010	NT	ND	NT	NT	ND	NT	NT	NT
Terbuthylazine	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA
	Date	30-Oct-2001	1-Nov-2001	26-Mar-2002	21-May-2002	30-May-2002	30-Jul-2002	13-Aug-2002	25-Jan-2005	6-Apr-2005
Parameter	Units									
Pharmaceutically Active Compounds										
Caffeine	µg/L	ND	NT	ND	NT	NT	ND	NT	ND	NT
Carbamazepine	µg/L	NT	0.0	ND	NT	NT	NT	NT	0.20	NT
Carisoprodol	µg/L	NT	NT	ND	NT	NT	NT	NT	0.0010	NT
Gemfibrozil	µg/L	NT	ND	ND	NT	NT	NT	NT	ND	NT
Ibuprofen	µg/L	NT	ND	ND	NT	NT	NT	NT	ND	NT
Naproxen	µg/L	NT	ND	ND	NT	NT	NT	NT	ND	NT
Radioactives										
Alpha Gross	pCi/L	1.5	NT	6.7	NT	NT	2.2	NT	NT	NT
Beta Gross	pCi/L	15	NT	14	NT	NT	17	NT	NT	NT
Radium 228	pCi/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Surfactants										
AP/APEO, Halogenated	µg/L	NT	NT	0.0060	NT	NT	NT	NT	ND	NT
AP1EO	µg/L	NT	ND	ND	NT	NT	NT	NT	ND	NT
AP2EO	µg/L	NT	ND	ND	NT	NT	NT	NT	NT	NT
AP3EO	µg/L	NT	ND	ND	NT	NT	NT	NT	NT	NT
APEC m/z 235	µg/L	NT	0.54	ND	NT	NT	NT	NT	NT	NT
APEC m/z 249	µg/L	NT	0.15	ND	NT	NT	NT	NT	NT	NT
APEC m/z 279	µg/L	NT	7.6	ND	NT	NT	NT	NT	NT	NT
APEC Total	µg/L	NT	8.3	ND	NT	NT	NT	NT	2.0	NT
APEC, Halogenated	µg/L	NT	NT	2.1	NT	NT	NT	NT	0.10	NT
APEO Total	µg/L	NT	ND	ND	NT	NT	NT	NT	NT	NT
NP/OP	µg/L	NT	0.16	ND	NT	NT	NT	NT	ND	NT
Surfactants	µg/L	220	NT	NT	100	NT	160	NT	NT	NT
Trihalomethanes										
Bromodichloromethane	µg/L	38	45	56	64	NT	23	NT	NT	NT
Bromoform	µg/L	0.50	ND	ND	1.8	NT	3.3	NT	NT	NT

Notes:

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NT - sample not tested for the given parameter
PARWQCP - Palo Alto Regional Water Quality Control Plant
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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SCRWA 30-Oct-2001	SCRWA 1-Nov-2001	SCRWA 26-Mar-2002	SCRWA 21-May-2002	SCRWA 30-May-2002	SCRWA 30-Jul-2002	SCRWA 13-Aug-2002	SCRWA 25-Jan-2005	SCRWA 6-Apr-2005
Trihalomethanes										
Chloroform	µg/L	64	88	95	84	NT	82	NT	NT	NT
Dibromochloromethane	µg/L	13	18	18	32	NT	5.7	NT	NT	NT
Trihalomethanes, Total	µg/L	NT	150	169	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SJ/SC WPCP
	Date	4-Apr-2007	19-Jun-2007	29-Jun-2007	2-Jul-2007	3-Jul-2007	2-Aug-2007	2-Jul-2007	2-May-2007	30-Oct-2001
Parameter	Units									
Cations and Anions										
Boron	µg/L	NT	421	NT	NT	NT	NT	NT	NT	482
Calcium as CaCO3	mg/L	NT	131	NT	NT	NT	NT	NT	NT	105
Calcium	mg/L	NT	52	NT	NT	NT	NT	NT	NT	48
Chloride	mg/L	NT	170	NT	NT	NT	NT	NT	NT	216
Chlorine Total by DPD	mg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	ND
Fluoride	mg/L	NT	0.23	NT	NT	NT	NT	NT	NT	0.60
Sodium	mg/L	NT	147	NT	NT	NT	NT	NT	NT	143
Sulfate	mg/L	NT	74	NT	NT	NT	NT	NT	NT	97
Disinfection Byproducts										
Bromate	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	ND
N-Nitroso dimethylamine (NDMA)	µg/L	NT	0.0033	NT	NT	NT	NT	NT	NT	0.036
General Water Quality										
Alkalinity, Total	mg/L	NT	263	NT	NT	NT	NT	NT	NT	134
Bicarbonate Alkalinity	mg/L	NT	320	NT	NT	NT	NT	NT	NT	163
Dissolved Organic Carbon	mg/L	NT	7.1	NT	NT	NT	NT	NT	NT	NT
Hardness as CaCO3	mg/L	NT	246	NT	NT	NT	NT	NT	NT	220
pH	pH units	NT	7.6	NT	NT	NT	NT	NT	NT	6.9
Silica	mg/L	NT	32	NT	NT	NT	NT	NT	NT	24
Total Filterable Residue at 180C	mg/L	NT	690	NT	NT	NT	NT	NT	NT	770
Total Organic Carbon	mg/L	NT	6.5	NT	NT	NT	NT	NT	NT	7.3
Total Suspended Solids	mg/L	NT	0.0	NT	NT	NT	NT	NT	NT	0.0
Turbidity	NTU	NT	0.39	NT	NT	NT	NT	NT	NT	0.73
UV-254	ABS	NT	0.078	NT	NT	NT	NT	NT	NT	0.11

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SCRWA 4-Apr-2007	SCRWA 19-Jun-2007	SCRWA 29-Jun-2007	SCRWA 2-Jul-2007	SCRWA 3-Jul-2007	SCRWA 2-Aug-2007	SCRWA 2-Jul-2007	SCRWA 2-May-2007	SJ/SC WPCP 30-Oct-2001
Haloacetic Acids										
Bromochloroacetic Acid	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Dibromoacetic Acid	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	NT
Dichloroacetic Acid	µg/L	NT	26	NT	NT	NT	NT	NT	NT	NT
Haloacetic Acids (5)	µg/L	NT	NT	79	NT	NT	NT	NT	NT	NT
Monobromoacetic Acid	µg/L	NT	ND	ND	NT	NT	NT	NT	NT	NT
Monochloroacetic Acid	µg/L	NT	2.4	NT	NT	NT	NT	NT	NT	NT
Trichloroacetic Acid	µg/L	NT	51	NT	NT	NT	NT	NT	NT	NT
Hormones										
Estrone	µg/L	NT	NT	NT	NT	NT	ND	NT	ND	NT
Estrone	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
Industrial Chemicals										
Carbon Tetrachloride	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	0.69
Di (2-Ethylhexyl) phthalate	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	0.70
EDTA	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Hexachlorocyclopentadiene	µg/L	NT	0.10	NT	NT	NT	NT	NT	NT	ND
NBBS	µg/L	NT	NT	NT	NT	NT	NT	0.050	NT	NT
Perchlorate	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	ND
Xylenes, Total	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	ND
Metals										
Aluminum	µg/L	NT	170	NT	NT	NT	NT	NT	NT	ND
Cadmium	µg/L	NT	ND	NT	ND	NT	NT	NT	NT	ND
Copper	µg/L	NT	ND	NT	ND	NT	NT	NT	NT	ND
Iron	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	ND
Lead	µg/L	NT	ND	NT	ND	NT	NT	NT	NT	ND
Magnesium	mg/L	NT	31	NT	NT	NT	NT	NT	NT	27
Manganese	µg/L	NT	ND	NT	ND	NT	NT	NT	NT	35

Notes:

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SJ/SC WPCP
	Date	4-Apr-2007	19-Jun-2007	29-Jun-2007	2-Jul-2007	3-Jul-2007	2-Aug-2007	2-Jul-2007	2-May-2007	30-Oct-2001
Parameter	Units									
Metals										
Nickel	µg/L	NT	ND	NT	ND	NT	NT	NT	NT	ND
Zinc	µg/L	NT	71	NT	71	NT	NT	NT	NT	77
Nutrients										
Nitrate as NO3	mg/L	NT	16	NT	NT	NT	NT	NT	NT	55
Nitrite as N	mg/L	NT	ND	NT	NT	NT	NT	NT	NT	ND
Phosphate	mg/L	NT	11	NT	NT	NT	NT	NT	NT	1.2
Organophosphates										
Tris(2,3-dichloropropyl)phosphate	µg/L	NT	NT	NT	NT	NT	NT	0.46	NT	NT
Tris(3-chloropropyl)phosphate	µg/L	NT	NT	NT	NT	NT	NT	0.23	NT	NT
Pathogens										
Coliforms, Total	MPN/100ml	NT	4.0	NT	NT	NT	NT	NT	NT	0.0
Cryptosporidium Oocysts	oocysts/L	NT	ND	NT	NT	NT	NT	NT	NT	0.0
E. Coli	MPN/100ml	NT	ND	NT	NT	NT	NT	NT	NT	0.0
Fecal Coliforms	MPN/100ml	NT	ND	NT	NT	NT	NT	NT	NT	0.0
Giardia	cysts/L	NT	0.30	NT	NT	NT	NT	NT	NT	0.0
Heterotrophic Plate Count by R2A	CFU/mL	NT	1200	NT	NT	NT	NT	NT	NT	2.0
Legionella	NA	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Culturable Virus Assay	MPN/100 L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Pesticides										
Aldicarb Sulfoxide	µg/L	NT	ND	NT	NT	ND	NT	NT	NT	ND
Heptachlor Epoxide	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	ND
Lindane (gamma-BHC)	µg/L	NT	ND	NT	NT	ND	NT	NT	NT	ND
Terbuthylazine	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SCRWA	SJ/SC WPCP
	Date	4-Apr-2007	19-Jun-2007	29-Jun-2007	2-Jul-2007	3-Jul-2007	2-Aug-2007	2-Jul-2007	2-May-2007	30-Oct-2001
Parameter	Units									
Pharmaceutically Active Compounds										
Caffeine	µg/L	NT	ND	NT	NT	NT	NT	ND	NT	ND
Carbamazepine	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
Carisoprodol	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
Gemfibrozil	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
Ibuprofen	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
Naproxen	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
Radioactives										
Alpha Gross	pCi/L	6.7	0.0	NT	NT	NT	NT	NT	NT	3.9
Beta Gross	pCi/L	14	19	NT	NT	NT	NT	NT	NT	12
Radium 228	pCi/L	NT	0.0	NT	NT	NT	NT	NT	NT	NT
Surfactants										
AP/APEO, Halogenated	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
AP1EO	µg/L	NT	ND	NT	NT	NT	NT	ND	NT	NT
AP2EO	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
AP3EO	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
APEC m/z 235	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
APEC m/z 249	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
APEC m/z 279	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
APEC Total	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
APEC, Halogenated	µg/L	NT	NT	NT	NT	NT	NT	1.7	NT	NT
APEO Total	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	NT
NP/OP	µg/L	NT	ND	NT	NT	NT	NT	0.094	NT	NT
Surfactants	µg/L	NT	99	NT	NT	NT	NT	NT	NT	360
Trihalomethanes										
Bromodichloromethane	µg/L	NT	25	NT	NT	NT	NT	NT	NT	54
Bromoform	µg/L	NT	ND	NT	NT	NT	NT	NT	NT	2.1

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SCRWA 4-Apr-2007	SCRWA 19-Jun-2007	SCRWA 29-Jun-2007	SCRWA 2-Jul-2007	SCRWA 3-Jul-2007	SCRWA 2-Aug-2007	SCRWA 2-Jul-2007	SCRWA 2-May-2007	SJ/SC WPCP 30-Oct-2001
Trihalomethanes										
Chloroform	µg/L	NT	77	NT	NT	NT	NT	NT	NT	54
Dibromochloromethane	µg/L	NT	4.5	NT	NT	NT	NT	NT	NT	28
Trihalomethanes, Total	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 1-Nov-2001	SJ/SC WPCP 3-Dec-2001	SJ/SC WPCP 4-Dec-2001	SJ/SC WPCP 5-Dec-2001	SJ/SC WPCP 26-Mar-2002	SJ/SC WPCP 21-May-2002	SJ/SC WPCP 30-Jul-2002	SJ/SC WPCP 14-Aug-2002	SJ/SC WPCP 25-Jan-2005
Cations and Anions										
Boron	µg/L	NT	NT	NT	NT	505	NT	405	NT	445
Calcium as CaCO3	mg/L	NT	NT	NT	NT	138	NT	122	NT	173
Calcium	mg/L	NT	NT	NT	NT	55	NT	49	NT	69
Chloride	mg/L	NT	NT	NT	NT	180	NT	196	NT	194
Chlorine Total by DPD	mg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/L	NT	NT	NT	NT	ND	NT	ND	NT	NT
Fluoride	mg/L	NT	NT	NT	NT	0.59	NT	0.74	NT	0.82
Sodium	mg/L	NT	NT	NT	NT	149	NT	156	NT	152
Sulfate	mg/L	NT	NT	NT	NT	101	NT	94	NT	107
Disinfection Byproducts										
Bromate	µg/L	NT	NT	NT	NT	ND	NT	ND	NT	ND
N-Nitroso dimethylamine (NDMA)	µg/L	NT	NT	NT	NT	0.026	NT	0.026	NT	NT
General Water Quality										
Alkalinity, Total	mg/L	NT	NT	NT	NT	174	NT	157	NT	217
Bicarbonate Alkalinity	mg/L	NT	NT	NT	NT	212	NT	192	NT	217
Dissolved Organic Carbon	mg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Hardness as CaCO3	mg/L	NT	NT	NT	NT	190	NT	218	NT	276
pH	pH units	NT	NT	NT	NT	7.0	NT	7.0	NT	7.6
Silica	mg/L	NT	NT	NT	NT	25	NT	11	NT	23
Total Filterable Residue at 180C	mg/L	NT	NT	NT	NT	710	NT	700	NT	720
Total Organic Carbon	mg/L	NT	NT	NT	NT	8.6	NT	7.8	NT	4.7
Total Suspended Solids	mg/L	NT	NT	NT	NT	0.0	NT	10	NT	1.0
Turbidity	NTU	NT	NT	NT	NT	0.33	NT	0.63	NT	0.90
UV-254	ABS	NT	NT	NT	NT	0.12	NT	0.11	NT	0.073

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP
	Date	1-Nov-2001	3-Dec-2001	4-Dec-2001	5-Dec-2001	26-Mar-2002	21-May-2002	30-Jul-2002	14-Aug-2002	25-Jan-2005
Parameter	Units									
Haloacetic Acids										
Bromochloroacetic Acid	µg/L	NT	37	NT	NT	30	NT	21	NT	ND
Dibromoacetic Acid	µg/L	NT	8.4	NT	NT	5.4	NT	6.8	NT	ND
Dichloroacetic Acid	µg/L	NT	79	NT	NT	80	NT	60	NT	1.3
Haloacetic Acids (5)	µg/L	NT	NT	184	NT	232	NT	155	NT	1.7
Monobromoacetic Acid	µg/L	NT	5.0	NT	NT	4.4	NT	4.6	NT	ND
Monochloroacetic Acid	µg/L	NT	21	NT	NT	18	NT	11	NT	ND
Trichloroacetic Acid	µg/L	NT	70	NT	NT	124	NT	73	NT	ND
Hormones										
Estrone	µg/L	ND	NT	NT	NT	NT	NT	NT	NT	NT
Estrone	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	ND
Industrial Chemicals										
Carbon Tetrachloride	µg/L	NT	NT	NT	NT	NT	ND	ND	NT	NT
Di (2-Ethylhexyl) phthalate	µg/L	NT	NT	NT	NT	ND	0.70	ND	NT	NT
EDTA	µg/L	NT	NT	NT	6.0	305	NT	NT	NT	NT
Hexachlorocyclopentadiene	µg/L	NT	NT	NT	NT	ND	ND	NT	NT	NT
NBBS	µg/L	NT	NT	NT	NT	0.015	NT	NT	NT	0.0040
Perchlorate	µg/L	NT	NT	NT	NT	ND	NT	ND	NT	ND
Xylenes, Total	µg/L	NT	NT	NT	NT	NT	ND	ND	NT	NT
Metals										
Aluminum	µg/L	NT	NT	NT	NT	ND	NT	86	NT	ND
Cadmium	µg/L	NT	NT	NT	NT	ND	NT	ND	NT	ND
Copper	µg/L	NT	NT	NT	NT	ND	NT	ND	NT	ND
Iron	µg/L	NT	NT	NT	NT	ND	NT	ND	NT	ND
Lead	µg/L	NT	NT	NT	NT	ND	NT	ND	NT	ND
Magnesium	mg/L	NT	NT	NT	NT	33	NT	27	NT	30
Manganese	µg/L	NT	NT	NT	NT	22	NT	33	NT	ND

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP
	Date	1-Nov-2001	3-Dec-2001	4-Dec-2001	5-Dec-2001	26-Mar-2002	21-May-2002	30-Jul-2002	14-Aug-2002	25-Jan-2005
Parameter	Units									
Metals										
Nickel	µg/L	NT	NT	NT	NT	ND	NT	ND	NT	12
Zinc	µg/L	NT	NT	NT	NT	ND	NT	ND	NT	ND
Nutrients										
Nitrate as NO3	mg/L	NT	NT	NT	NT	47	NT	33	NT	43
Nitrite as N	mg/L	NT	NT	NT	NT	ND	NT	0.0	NT	ND
Phosphate	mg/L	NT	NT	NT	NT	2.1	NT	0.71	NT	2.0
Organophosphates										
Tris(2,3-dichloropropyl)phosphate	µg/L	NT	NT	NT	NT	0.010	NT	NT	NT	0.0070
Tris(3-chloropropyl)phosphate	µg/L	NT	NT	NT	NT	0.011	NT	NT	NT	0.010
Pathogens										
Coliforms, Total	MPN/100ml	NT	NT	NT	NT	2.0	NT	0.0	NT	110
Cryptosporidium Oocysts	oocysts/L	NT	NT	NT	NT	0.0	NT	0.0	NT	0.0
E. Coli	MPN/100ml	NT	NT	NT	NT	0.0	NT	0.0	NT	0.0
Fecal Coliforms	MPN/100ml	NT	NT	NT	NT	0.0	NT	0.0	NT	0.0
Giardia	cysts/L	NT	NT	NT	NT	0.0	NT	0.20	NT	0.0
Heterotrophic Plate Count by R2A	CFU/mL	NT	NT	NT	NT	0.0	NT	0.0	NT	64000
Legionella	NA	NT	ND	NT	NT	ND	NT	NT	ND	NT
Total Culturable Virus Assay	MPN/100 L	NT	ND	NT	NT	ND	NT	NT	ND	NT
Pesticides										
Aldicarb Sulfoxide	µg/L	NT	NT	NT	NT	1.3	NT	ND	NT	NT
Heptachlor Epoxide	µg/L	NT	NT	NT	NT	ND	ND	ND	NT	NT
Lindane (gamma-BHC)	µg/L	NT	NT	NT	NT	ND	ND	ND	NT	NT
Terbuthylazine	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP
	Date	1-Nov-2001	3-Dec-2001	4-Dec-2001	5-Dec-2001	26-Mar-2002	21-May-2002	30-Jul-2002	14-Aug-2002	25-Jan-2005
Parameter	Units									
Pharmaceutically Active Compounds										
Caffeine	µg/L	NT	NT	NT	NT	ND	ND	ND	NT	ND
Carbamazepine	µg/L	NT	NT	NT	ND	ND	NT	NT	NT	ND
Carisoprodol	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
Gemfibrozil	µg/L	NT	NT	NT	ND	ND	NT	NT	NT	ND
Ibuprofen	µg/L	NT	NT	NT	ND	ND	NT	NT	NT	ND
Naproxen	µg/L	NT	NT	NT	ND	ND	NT	NT	NT	ND
Radioactives										
Alpha Gross	pCi/L	NT	NT	NT	NT	4.1	NT	0.0	NT	NT
Beta Gross	pCi/L	NT	NT	NT	NT	11	NT	11	NT	NT
Radium 228	pCi/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Surfactants										
AP/APEO, Halogenated	µg/L	NT	NT	NT	NT	0.026	NT	NT	NT	ND
AP1EO	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
AP2EO	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
AP3EO	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
APEC m/z 235	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
APEC m/z 249	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
APEC m/z 279	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
APEC Total	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	0.060
APEC, Halogenated	µg/L	NT	NT	NT	NT	13	NT	NT	NT	0.20
APEO Total	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
NP/OP	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	0.0020
Surfactants	µg/L	NT	NT	NT	NT	NT	120	190	NT	NT
Trihalomethanes										
Bromodichloromethane	µg/L	NT	NT	NT	NT	NT	72	36	NT	NT
Bromoform	µg/L	NT	NT	NT	NT	NT	2.2	2.5	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 1-Nov-2001	SJ/SC WPCP 3-Dec-2001	SJ/SC WPCP 4-Dec-2001	SJ/SC WPCP 5-Dec-2001	SJ/SC WPCP 26-Mar-2002	SJ/SC WPCP 21-May-2002	SJ/SC WPCP 30-Jul-2002	SJ/SC WPCP 14-Aug-2002	SJ/SC WPCP 25-Jan-2005
Trihalomethanes										
Chloroform	µg/L	NT	NT	NT	NT	NT	94	37	NT	NT
Dibromochloromethane	µg/L	NT	NT	NT	NT	NT	34	18	NT	NT
Trihalomethanes, Total	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP	SJ/SC WPCP
	Date	2-Mar-2005	6-Apr-2005	4-Apr-2007	18-Jun-2007	19-Jun-2007	20-Jun-2007	22-Jun-2007	26-Jun-2007	4-Jul-2007
Parameter	Units									
Cations and Anions										
Boron	µg/L	NT	NT	NT	449	NT	NT	NT	NT	NT
Calcium as CaCO3	mg/L	NT	NT	NT	141	NT	NT	NT	NT	NT
Calcium	mg/L	NT	NT	NT	56	NT	NT	NT	55	NT
Chloride	mg/L	196	NT	NT	172	NT	NT	NT	NT	NT
Chlorine Total by DPD	mg/L	NT	0.20	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/L	NT	NT	NT	NT	NT	NT	NT	58	NT
Fluoride	mg/L	NT	NT	NT	0.85	NT	NT	NT	NT	NT
Sodium	mg/L	137	NT	NT	149	NT	NT	NT	NT	NT
Sulfate	mg/L	NT	NT	NT	NT	113	NT	NT	NT	NT
Disinfection Byproducts										
Bromate	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
N-Nitroso dimethylamine (NDMA)	µg/L	NT	NT	NT	NT	NT	NT	NT	0.287	NT
General Water Quality										
Alkalinity, Total	mg/L	203	NT	NT	187	NT	NT	NT	186	NT
Bicarbonate Alkalinity	mg/L	203	NT	NT	187	NT	NT	NT	230	231
Dissolved Organic Carbon	mg/L	5.0	NT	NT	5.4	NT	NT	NT	NT	NT
Hardness as CaCO3	mg/L	285	NT	NT	NT	246	NT	NT	NT	246
pH	pH units	7.7	7.6	NT	NT	7.5	NT	NT	8.1	NT
Silica	mg/L	NT	NT	NT	NT	NT	NT	23	NT	NT
Total Filterable Residue at 180C	mg/L	729	NT	NT	668	NT	NT	NT	NT	NT
Total Organic Carbon	mg/L	NT	NT	NT	4.7	NT	NT	NT	NT	NT
Total Suspended Solids	mg/L	NT	NT	NT	1.0	NT	NT	NT	NT	NT
Turbidity	NTU	NT	NT	NT	NT	0.89	NT	NT	NT	NT
UV-254	ABS	0.080	NT	NT	NT	0.14	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 2-Mar-2005	SJ/SC WPCP 6-Apr-2005	SJ/SC WPCP 4-Apr-2007	SJ/SC WPCP 18-Jun-2007	SJ/SC WPCP 19-Jun-2007	SJ/SC WPCP 20-Jun-2007	SJ/SC WPCP 22-Jun-2007	SJ/SC WPCP 26-Jun-2007	SJ/SC WPCP 4-Jul-2007
Haloacetic Acids										
Bromochloroacetic Acid	µg/L	ND	NT	NT	NT	NT	NT	NT	NT	NT
Dibromoacetic Acid	µg/L	2.0	NT	NT	2.4	NT	NT	NT	NT	NT
Dichloroacetic Acid	µg/L	1.9	NT	NT	15	NT	NT	NT	NT	NT
Haloacetic Acids (5)	µg/L	3.9	NT	NT	27	NT	NT	NT	NT	NT
Monobromoacetic Acid	µg/L	ND	NT	NT	1.0	NT	NT	NT	NT	NT
Monochloroacetic Acid	µg/L	ND	NT	NT	2.7	NT	NT	NT	NT	NT
Trichloroacetic Acid	µg/L	ND	NT	NT	6.1	NT	NT	NT	NT	NT
Hormones										
Estrone	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Estrone	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Industrial Chemicals										
Carbon Tetrachloride	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
Di (2-Ethylhexyl) phthalate	µg/L	NT	NT	NT	NT	NT	NT	NT	ND	NT
EDTA	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Hexachlorocyclopentadiene	µg/L	NT	NT	NT	NT	NT	NT	NT	ND	NT
NBBS	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Perchlorate	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
Xylenes, Total	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
Metals										
Aluminum	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
Cadmium	µg/L	NT	NT	NT	12	NT	NT	NT	NT	NT
Copper	µg/L	NT	NT	NT	61	NT	NT	NT	NT	NT
Iron	µg/L	NT	NT	NT	120	NT	NT	NT	NT	NT
Lead	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
Magnesium	mg/L	NT	NT	NT	31	NT	NT	NT	NT	NT
Manganese	µg/L	NT	NT	NT	35	NT	NT	NT	NT	NT

Notes:

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SWPCP - Sunnyvale Water Pollution Control Plant

Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 2-Mar-2005	SJ/SC WPCP 6-Apr-2005	SJ/SC WPCP 4-Apr-2007	SJ/SC WPCP 18-Jun-2007	SJ/SC WPCP 19-Jun-2007	SJ/SC WPCP 20-Jun-2007	SJ/SC WPCP 22-Jun-2007	SJ/SC WPCP 26-Jun-2007	SJ/SC WPCP 4-Jul-2007
Metals										
Nickel	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
Zinc	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
Nutrients										
Nitrate as NO3	mg/L	40	NT	NT	NT	36	NT	NT	NT	NT
Nitrite as N	mg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
Phosphate	mg/L	NT	NT	NT	NT	0.45	NT	NT	NT	NT
Organophosphates										
Tris(2,3-dichloropropyl)phosphate	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Tris(3-chloropropyl)phosphate	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Pathogens										
Coliforms, Total	MPN/100ml	NT	NT	NT	ND	NT	NT	NT	NT	NT
Cryptosporidium Oocysts	oocysts/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
E. Coli	MPN/100ml	NT	NT	NT	ND	NT	NT	NT	NT	NT
Fecal Coliforms	MPN/100ml	NT	NT	NT	ND	NT	NT	NT	NT	NT
Giardia	cysts/L	NT	NT	NT	0.40	NT	NT	NT	NT	NT
Heterotrophic Plate Count by R2A	CFU/mL	NT	NT	NT	450	NT	NT	NT	NT	NT
Legionella	NA	NT	NT	NT	NT	NT	NT	NT	NT	NT
Total Culturable Virus Assay	MPN/100 L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Pesticides										
Aldicarb Sulfoxide	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT
Heptachlor Epoxide	µg/L	NT	NT	NT	NT	NT	NT	NT	ND	NT
Lindane (gamma-BHC)	µg/L	NT	NT	NT	NT	NT	NT	NT	ND	NT
Terbuthylazine	µg/L	NT	NT	NT	NT	NT	NT	NT	0.10	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 2-Mar-2005	SJ/SC WPCP 6-Apr-2005	SJ/SC WPCP 4-Apr-2007	SJ/SC WPCP 18-Jun-2007	SJ/SC WPCP 19-Jun-2007	SJ/SC WPCP 20-Jun-2007	SJ/SC WPCP 22-Jun-2007	SJ/SC WPCP 26-Jun-2007	SJ/SC WPCP 4-Jul-2007
Pharmaceutically Active Compounds										
Caffeine	µg/L	NT	NT	NT	NT	NT	NT	NT	ND	NT
Carbamazepine	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Carisoprodol	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Gemfibrozil	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Ibuprofen	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Naproxen	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Radioactives										
Alpha Gross	pCi/L	NT	NT	4.1	NT	NT	NT	NT	0.0	NT
Beta Gross	pCi/L	NT	NT	11	NT	NT	NT	NT	5.2	NT
Radium 228	pCi/L	NT	NT	NT	NT	NT	NT	NT	0.0	NT
Surfactants										
AP/APEO, Halogenated	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
AP1EO	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
AP2EO	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
AP3EO	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
APEC m/z 235	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
APEC m/z 249	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
APEC m/z 279	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
APEC Total	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
APEC, Halogenated	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
APEO Total	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
NP/OP	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Surfactants	µg/L	NT	NT	NT	NT	NT	NT	NT	130	NT
Trihalomethanes										
Bromodichloromethane	µg/L	NT	NT	NT	7.0	NT	7.0	NT	NT	NT
Bromoform	µg/L	NT	NT	NT	ND	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 2-Mar-2005	SJ/SC WPCP 6-Apr-2005	SJ/SC WPCP 4-Apr-2007	SJ/SC WPCP 18-Jun-2007	SJ/SC WPCP 19-Jun-2007	SJ/SC WPCP 20-Jun-2007	SJ/SC WPCP 22-Jun-2007	SJ/SC WPCP 26-Jun-2007	SJ/SC WPCP 4-Jul-2007
Trihalomethanes										
Chloroform	µg/L	NT	NT	NT	NT	NT	13	NT	NT	NT
Dibromochloromethane	µg/L	NT	NT	NT	NT	NT	2.4	NT	NT	NT
Trihalomethanes, Total	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 2-Aug-2007	SJ/SC WPCP 2-Jul-2007	SJ/SC WPCP 2-Jun-2007	SJ/SC WPCP 2-May-2007	SWPCP 30-Oct-2001	SWPCP 1-Nov-2001	SWPCP 3-Dec-2001	SWPCP 5-Dec-2001	SWPCP 26-Mar-2002
Cations and Anions										
Boron	µg/L	NT	NT	NT	NT	469	NT	NT	NT	432
Calcium as CaCO3	mg/L	NT	NT	NT	NT	109	NT	NT	NT	133
Calcium	mg/L	NT	NT	NT	NT	51	NT	NT	NT	53
Chloride	mg/L	NT	NT	NT	NT	254	NT	NT	NT	215
Chlorine Total by DPD	mg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Cyanide	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
Fluoride	mg/L	NT	NT	NT	NT	0.71	NT	NT	NT	0.74
Sodium	mg/L	NT	NT	NT	NT	201	NT	NT	NT	165
Sulfate	mg/L	NT	NT	NT	NT	247	NT	NT	NT	126
Disinfection Byproducts										
Bromate	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
N-Nitroso dimethylamine (NDMA)	µg/L	NT	NT	NT	NT	0.080	NT	NT	NT	0.11
General Water Quality										
Alkalinity, Total	mg/L	NT	NT	NT	NT	95	NT	NT	NT	115
Bicarbonate Alkalinity	mg/L	NT	NT	NT	NT	95	NT	NT	NT	131
Dissolved Organic Carbon	mg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Hardness as CaCO3	mg/L	NT	NT	NT	NT	273	NT	NT	NT	200
pH	pH units	NT	NT	NT	NT	6.5	NT	NT	NT	6.9
Silica	mg/L	NT	NT	NT	NT	14	NT	NT	NT	16
Total Filterable Residue at 180C	mg/L	NT	NT	NT	NT	1000	NT	NT	NT	770
Total Organic Carbon	mg/L	NT	NT	NT	NT	9.0	NT	NT	NT	8.0
Total Suspended Solids	mg/L	NT	NT	NT	NT	0.0	NT	NT	NT	0.0
Turbidity	NTU	NT	NT	NT	NT	1.5	NT	NT	NT	0.73
UV-254	ABS	NT	NT	NT	NT	0.17	NT	NT	NT	0.14

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 2-Aug-2007	SJ/SC WPCP 2-Jul-2007	SJ/SC WPCP 2-Jun-2007	SJ/SC WPCP 2-May-2007	SWPCP 30-Oct-2001	SWPCP 1-Nov-2001	SWPCP 3-Dec-2001	SWPCP 5-Dec-2001	SWPCP 26-Mar-2002
Haloacetic Acids										
Bromochloroacetic Acid	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	3.8
Dibromoacetic Acid	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	1.4
Dichloroacetic Acid	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	6.7
Haloacetic Acids (5)	µg/L	NT	NT	NT	NT	NT	NT	5.2	NT	15
Monobromoacetic Acid	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	ND
Monochloroacetic Acid	µg/L	NT	NT	NT	NT	NT	NT	ND	NT	1.2
Trichloroacetic Acid	µg/L	NT	NT	NT	NT	NT	NT	5.2	NT	5.5
Hormones										
Estrone	µg/L	ND	NT	NT	ND	NT	ND	NT	NT	NT
Estrone	µg/L	NT	ND	ND	NT	NT	NT	NT	NT	NT
Industrial Chemicals										
Carbon Tetrachloride	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
Di (2-Ethylhexyl) phthalate	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
EDTA	µg/L	NT	NT	NT	NT	NT	NT	NT	8.3	28
Hexachlorocyclopentadiene	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
NBBS	µg/L	NT	0.27	0.017	NT	NT	NT	NT	NT	ND
Perchlorate	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
Xylenes, Total	µg/L	NT	NT	NT	NT	3.8	NT	NT	NT	NT
Metals										
Aluminum	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
Cadmium	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
Copper	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
Iron	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
Lead	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
Magnesium	mg/L	NT	NT	NT	NT	37	NT	NT	NT	37
Manganese	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	34

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 2-Aug-2007	SJ/SC WPCP 2-Jul-2007	SJ/SC WPCP 2-Jun-2007	SJ/SC WPCP 2-May-2007	SWPCP 30-Oct-2001	SWPCP 1-Nov-2001	SWPCP 3-Dec-2001	SWPCP 5-Dec-2001	SWPCP 26-Mar-2002
Metals										
Nickel	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
Zinc	µg/L	NT	NT	NT	NT	67	NT	NT	NT	ND
Nutrients										
Nitrate as NO3	mg/L	NT	NT	NT	NT	70	NT	NT	NT	61
Nitrite as N	mg/L	NT	NT	NT	NT	0.40	NT	NT	NT	ND
Phosphate	mg/L	NT	NT	NT	NT	6.6	NT	NT	NT	5.6
Organophosphates										
Tris(2,3-dichloropropyl)phosphate	µg/L	NT	0.32	0.010	NT	NT	NT	NT	NT	0.0020
Tris(3-chloropropyl)phosphate	µg/L	NT	0.022	0.0030	NT	NT	NT	NT	NT	0.0080
Pathogens										
Coliforms, Total	MPN/100ml	NT	NT	NT	NT	0.0	NT	NT	NT	0.0
Cryptosporidium Oocysts	oocysts/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
E. Coli	MPN/100ml	NT	NT	NT	NT	0.0	NT	NT	NT	0.0
Fecal Coliforms	MPN/100ml	NT	NT	NT	NT	0.0	NT	NT	NT	0.0
Giardia	cysts/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Heterotrophic Plate Count by R2A	CFU/mL	NT	NT	NT	NT	1800	NT	NT	NT	19
Legionella	NA	NT	NT	NT	NT	NT	NT	detected	NT	ND
Total Culturable Virus Assay	MPN/100 L	NT	NT	NT	NT	NT	NT	ND	NT	ND
Pesticides										
Aldicarb Sulfoxide	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	1.5
Heptachlor Epoxide	µg/L	NT	NT	NT	NT	0.010	NT	NT	NT	ND
Lindane (gamma-BHC)	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	ND
Terbuthylazine	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 2-Aug-2007	SJ/SC WPCP 2-Jul-2007	SJ/SC WPCP 2-Jun-2007	SJ/SC WPCP 2-May-2007	SWPCP 30-Oct-2001	SWPCP 1-Nov-2001	SWPCP 3-Dec-2001	SWPCP 5-Dec-2001	SWPCP 26-Mar-2002
Pharmaceutically Active Compounds										
Caffeine	µg/L	NT	ND	ND	NT	1.0	NT	NT	NT	ND
Carbamazepine	µg/L	NT	ND	ND	NT	NT	NT	NT	ND	ND
Carisoprodol	µg/L	NT	ND	ND	NT	NT	NT	NT	NT	ND
Gemfibrozil	µg/L	NT	ND	ND	NT	NT	NT	NT	ND	0.22
Ibuprofen	µg/L	NT	ND	ND	NT	NT	NT	NT	0.046	0.020
Naproxen	µg/L	NT	ND	ND	NT	NT	NT	NT	ND	ND
Radioactives										
Alpha Gross	pCi/L	NT	NT	NT	NT	3.2	NT	NT	NT	3.8
Beta Gross	pCi/L	NT	NT	NT	NT	9.4	NT	NT	NT	11
Radium 228	pCi/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Surfactants										
AP/APEO, Halogenated	µg/L	NT	ND	ND	NT	NT	NT	NT	NT	ND
AP1EO	µg/L	NT	ND	ND	NT	NT	NT	NT	0.14	0.14
AP2EO	µg/L	NT	ND	ND	NT	NT	NT	NT	0.48	ND
AP3EO	µg/L	NT	ND	ND	NT	NT	NT	NT	0.14	ND
APEC m/z 235	µg/L	NT	ND	ND	NT	NT	NT	NT	9.2	6.0
APEC m/z 249	µg/L	NT	ND	ND	NT	NT	NT	NT	2.8	1.6
APEC m/z 279	µg/L	NT	ND	ND	NT	NT	NT	NT	6.3	2.4
APEC Total	µg/L	NT	ND	ND	NT	NT	NT	NT	18	10
APEC, Halogenated	µg/L	NT	15	1.7	NT	NT	NT	NT	NT	ND
APEO Total	µg/L	NT	ND	ND	NT	NT	NT	NT	0.76	0.14
NP/OP	µg/L	NT	ND	ND	NT	NT	NT	NT	0.064	0.035
Surfactants	µg/L	NT	NT	NT	NT	280	NT	NT	NT	NT
Trihalomethanes										
Bromodichloromethane	µg/L	NT	NT	NT	NT	6.1	NT	NT	NT	NT
Bromoform	µg/L	NT	NT	NT	NT	3.0	NT	NT	NT	NT

Notes:

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SJ/SC WPCP 2-Aug-2007	SJ/SC WPCP 2-Jul-2007	SJ/SC WPCP 2-Jun-2007	SJ/SC WPCP 2-May-2007	SWPCP 30-Oct-2001	SWPCP 1-Nov-2001	SWPCP 3-Dec-2001	SWPCP 5-Dec-2001	SWPCP 26-Mar-2002
Trihalomethanes										
Chloroform	µg/L	NT	NT	NT	NT	3.7	NT	NT	NT	NT
Dibromochloromethane	µg/L	NT	NT	NT	NT	5.2	NT	NT	NT	NT
Trihalomethanes, Total	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

	Location	SWPCP	SWPCP	SWPCP	SWPCP	SWPCP	SWPCP	SWPCP	SWPCP	SWPCP
	Date	21-May-2002	30-Jul-2002	14-Aug-2002	26-Jan-2005	15-Mar-2005	5-Apr-2005	4-Apr-2007	26-Jun-2007	2-Aug-2007
Parameter	Units									
Cations and Anions										
Boron	µg/L	NT	371	NT	355	NT	NT	NT	416	NT
Calcium as CaCO3	mg/L	NT	133	NT	135	NT	NT	NT	137	NT
Calcium	mg/L	NT	54	NT	54	NT	NT	NT	56	NT
Chloride	mg/L	NT	210	NT	225	NT	NT	NT	288	NT
Chlorine Total by DPD	mg/L	NT	NT	NT	NT	NT	2.5	NT	NT	NT
Cyanide	µg/L	NT	ND	NT	NT	NT	NT	NT	ND	NT
Fluoride	mg/L	NT	0.87	NT	0.55	NT	NT	NT	1.7	NT
Sodium	mg/L	NT	165	NT	143	NT	NT	NT	210	NT
Sulfate	mg/L	NT	99	NT	108	NT	NT	NT	103	NT
Disinfection Byproducts										
Bromate	µg/L	NT	ND	NT	ND	NT	NT	NT	ND	NT
N-Nitroso dimethylamine (NDMA)	µg/L	NT	0.0044	NT	NT	NT	NT	NT	0.0066	NT
General Water Quality										
Alkalinity, Total	mg/L	NT	157	NT	139	NT	NT	NT	170	NT
Bicarbonate Alkalinity	mg/L	NT	191	NT	139	NT	NT	NT	210	NT
Dissolved Organic Carbon	mg/L	NT	NT	NT	NT	NT	NT	NT	9.0	NT
Hardness as CaCO3	mg/L	NT	266	NT	275	NT	NT	NT	319	NT
pH	pH units	NT	7.1	NT	6.7	NT	7.1	NT	7.9	NT
Silica	mg/L	NT	0.90	NT	12	NT	NT	NT	8.8	NT
Total Filterable Residue at 180C	mg/L	NT	750	NT	777	NT	NT	NT	906	NT
Total Organic Carbon	mg/L	NT	9.6	NT	6.7	NT	NT	NT	7.9	NT
Total Suspended Solids	mg/L	NT	10	NT	4.0	NT	NT	NT	2.0	NT
Turbidity	NTU	NT	2.2	NT	2.1	NT	NT	NT	0.92	NT
UV-254	ABS	NT	0.14	NT	0.11	NT	NT	NT	0.12	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SWPCP 21-May-2002	SWPCP 30-Jul-2002	SWPCP 14-Aug-2002	SWPCP 26-Jan-2005	SWPCP 15-Mar-2005	SWPCP 5-Apr-2005	SWPCP 4-Apr-2007	SWPCP 26-Jun-2007	SWPCP 2-Aug-2007
Haloacetic Acids										
Bromochloroacetic Acid	µg/L	NT	24	NT	6.6	NT	NT	NT	NT	NT
Dibromoacetic Acid	µg/L	NT	15	NT	6.4	NT	NT	NT	23	NT
Dichloroacetic Acid	µg/L	NT	28	NT	9.3	NT	NT	NT	17	NT
Haloacetic Acids (5)	µg/L	NT	97	NT	21	NT	NT	NT	64	NT
Monobromoacetic Acid	µg/L	NT	4.6	NT	ND	NT	NT	NT	1.6	NT
Monochloroacetic Acid	µg/L	NT	3.4	NT	ND	NT	NT	NT	NT	NT
Trichloroacetic Acid	µg/L	NT	46	NT	5.4	NT	NT	NT	22	NT
Hormones										
Estrone	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	ND
Estrone	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
Industrial Chemicals										
Carbon Tetrachloride	µg/L	ND	ND	NT	NT	NT	ND	NT	ND	NT
Di (2-Ethylhexyl) phthalate	µg/L	NT	ND	NT	NT	NT	NT	NT	ND	NT
EDTA	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
Hexachlorocyclopentadiene	µg/L	NT	ND	NT	NT	NT	NT	NT	ND	NT
NBBS	µg/L	NT	NT	NT	NT	0.010	NT	NT	NT	NT
Perchlorate	µg/L	NT	ND	NT	12	NT	NT	NT	ND	NT
Xylenes, Total	µg/L	ND	ND	NT	NT	NT	ND	NT	ND	NT
Metals										
Aluminum	µg/L	NT	ND	NT	ND	NT	NT	NT	ND	NT
Cadmium	µg/L	NT	ND	NT	ND	NT	NT	NT	ND	NT
Copper	µg/L	NT	ND	NT	ND	NT	NT	NT	ND	NT
Iron	µg/L	NT	ND	NT	ND	NT	NT	NT	ND	NT
Lead	µg/L	NT	ND	NT	11	NT	NT	NT	ND	NT
Magnesium	mg/L	NT	37	NT	39	NT	NT	NT	42	NT
Manganese	µg/L	NT	32	NT	ND	NT	NT	NT	33	NT

Notes:

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SWPCP - Sunnyvale Water Pollution Control Plant

Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SWPCP 21-May-2002	SWPCP 30-Jul-2002	SWPCP 14-Aug-2002	SWPCP 26-Jan-2005	SWPCP 15-Mar-2005	SWPCP 5-Apr-2005	SWPCP 4-Apr-2007	SWPCP 26-Jun-2007	SWPCP 2-Aug-2007
Metals										
Nickel	µg/L	NT	ND	NT	47	NT	NT	NT	ND	NT
Zinc	µg/L	NT	ND	NT	ND	NT	NT	NT	ND	NT
Nutrients										
Nitrate as NO3	mg/L	NT	26	NT	69	NT	NT	NT	45	NT
Nitrite as N	mg/L	NT	0.0	NT	ND	NT	NT	NT	ND	NT
Phosphate	mg/L	NT	13	NT	12	NT	NT	NT	14	NT
Organophosphates										
Tris(2,3-dichloropropyl)phosphate	µg/L	NT	NT	NT	NT	0.010	NT	NT	NT	NT
Tris(3-chloropropyl)phosphate	µg/L	NT	NT	NT	NT	0.030	NT	NT	NT	NT
Pathogens										
Coliforms, Total	MPN/100ml	NT	0.0	NT	0.0	NT	NT	NT	23	NT
Cryptosporidium Oocysts	oocysts/L	NT	0.0	NT	NT	NT	NT	NT	ND	NT
E. Coli	MPN/100ml	NT	0.0	NT	0.0	NT	NT	NT	8.0	NT
Fecal Coliforms	MPN/100ml	NT	0.0	NT	0.0	NT	NT	NT	13	NT
Giardia	cysts/L	NT	0.0	NT	NT	NT	NT	NT	ND	NT
Heterotrophic Plate Count by R2A	CFU/mL	NT	250	NT	64	NT	NT	NT	12000	NT
Legionella	NA	NT	NT	ND	NT	NT	NT	NT	NT	NT
Total Culturable Virus Assay	MPN/100 L	NT	NT	ND	NT	NT	NT	NT	NT	NT
Pesticides										
Aldicarb Sulfoxide	µg/L	NT	ND	NT	NT	NT	NT	NT	ND	NT
Heptachlor Epoxide	µg/L	NT	ND	NT	NT	NT	NT	NT	ND	NT
Lindane (gamma-BHC)	µg/L	NT	ND	NT	NT	NT	NT	NT	ND	NT
Terbuthylazine	µg/L	NT	NT	NT	NT	NT	NT	NT	ND	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SWPCP 21-May-2002	SWPCP 30-Jul-2002	SWPCP 14-Aug-2002	SWPCP 26-Jan-2005	SWPCP 15-Mar-2005	SWPCP 5-Apr-2005	SWPCP 4-Apr-2007	SWPCP 26-Jun-2007	SWPCP 2-Aug-2007
Pharmaceutically Active Compounds										
Caffeine	µg/L	NT	ND	NT	NT	ND	NT	NT	ND	NT
Carbamazepine	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
Carisoprodol	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
Gemfibrozil	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
Ibuprofen	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
Naproxen	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
Radioactives										
Alpha Gross	pCi/L	NT	0.0	NT	NT	NT	NT	3.8	0.0	NT
Beta Gross	pCi/L	NT	12	NT	NT	NT	NT	11	9.1	NT
Radium 228	pCi/L	NT	NT	NT	NT	NT	NT	NT	0.0	NT
Surfactants										
AP/APEO, Halogenated	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
AP1EO	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
AP2EO	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
AP3EO	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
APEC m/z 235	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
APEC m/z 249	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
APEC m/z 279	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
APEC Total	µg/L	NT	NT	NT	NT	3.0	NT	NT	NT	NT
APEC, Halogenated	µg/L	NT	NT	NT	NT	0.30	NT	NT	NT	NT
APEO Total	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT
NP/OP	µg/L	NT	NT	NT	NT	ND	NT	NT	NT	NT
Surfactants	µg/L	94	130	NT	NT	NT	NT	NT	140	NT
Trihalomethanes										
Bromodichloromethane	µg/L	95	85	NT	NT	NT	64	NT	86	NT
Bromoform	µg/L	18	15	NT	NT	NT	18	NT	33	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SWPCP 21-May-2002	SWPCP 30-Jul-2002	SWPCP 14-Aug-2002	SWPCP 26-Jan-2005	SWPCP 15-Mar-2005	SWPCP 5-Apr-2005	SWPCP 4-Apr-2007	SWPCP 26-Jun-2007	SWPCP 2-Aug-2007
Trihalomethanes										
Chloroform	µg/L	70	63	NT	NT	NT	42	NT	34	NT
Dibromochloromethane	µg/L	91	70	NT	NT	NT	64	NT	115	NT
Trihalomethanes, Total	µg/L	NT	NT	NT	NT	NT	NT	NT	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SWPCP 2-Jul-2007	SWPCP 2-May-2007
Cations and Anions			
Boron	µg/L	NT	NT
Calcium as CaCO3	mg/L	NT	NT
Calcium	mg/L	NT	NT
Chloride	mg/L	NT	NT
Chlorine Total by DPD	mg/L	NT	NT
Cyanide	µg/L	NT	NT
Fluoride	mg/L	NT	NT
Sodium	mg/L	NT	NT
Sulfate	mg/L	NT	NT
Disinfection Byproducts			
Bromate	µg/L	NT	NT
N-Nitroso dimethylamine (NDMA)	µg/L	NT	NT
General Water Quality			
Alkalinity, Total	mg/L	NT	NT
Bicarbonate Alkalinity	mg/L	NT	NT
Dissolved Organic Carbon	mg/L	NT	NT
Hardness as CaCO3	mg/L	NT	NT
pH	pH units	NT	NT
Silica	mg/L	NT	NT
Total Filterable Residue at 180C	mg/L	NT	NT
Total Organic Carbon	mg/L	NT	NT
Total Suspended Solids	mg/L	NT	NT
Turbidity	NTU	NT	NT
UV-254	ABS	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SWPCP 2-Jul-2007	SWPCP 2-May-2007
Haloacetic Acids			
Bromochloroacetic Acid	µg/L	NT	NT
Dibromoacetic Acid	µg/L	NT	NT
Dichloroacetic Acid	µg/L	NT	NT
Haloacetic Acids (5)	µg/L	NT	NT
Monobromoacetic Acid	µg/L	NT	NT
Monochloroacetic Acid	µg/L	NT	NT
Trichloroacetic Acid	µg/L	NT	NT
Hormones			
Estrone	µg/L	NT	ND
Estrone	µg/L	ND	NT
Industrial Chemicals			
Carbon Tetrachloride	µg/L	NT	NT
Di (2-Ethylhexyl) phthalate	µg/L	NT	NT
EDTA	µg/L	NT	NT
Hexachlorocyclopentadiene	µg/L	NT	NT
NBBS	µg/L	ND	NT
Perchlorate	µg/L	NT	NT
Xylenes, Total	µg/L	NT	NT
Metals			
Aluminum	µg/L	NT	NT
Cadmium	µg/L	NT	NT
Copper	µg/L	NT	NT
Iron	µg/L	NT	NT
Lead	µg/L	NT	NT
Magnesium	mg/L	NT	NT
Manganese	µg/L	NT	NT

Notes:

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NT - sample not tested for the given parameter

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SWPCP - Sunnyvale Water Pollution Control Plant

Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SWPCP 2-Jul-2007	SWPCP 2-May-2007
Metals			
Nickel	μg/L	NT	NT
Zinc	μg/L	NT	NT
Nutrients			
Nitrate as NO3	mg/L	NT	NT
Nitrite as N	mg/L	NT	NT
Phosphate	mg/L	NT	NT
Organophosphates			
Tris(2,3-dichloropropyl)phosphate	μg/L	ND	NT
Tris(3-chloropropyl)phosphate	μg/L	ND	NT
Pathogens			
Coliforms, Total	MPN/100ml	NT	NT
Cryptosporidium Oocysts	oocysts/L	NT	NT
E. Coli	MPN/100ml	NT	NT
Fecal Coliforms	MPN/100ml	NT	NT
Giardia	cysts/L	NT	NT
Heterotrophic Plate Count by R2A	CFU/mL	NT	NT
Legionella	NA	NT	NT
Total Culturable Virus Assay	MPN/100 L	NT	NT
Pesticides			
Aldicarb Sulfoxide	μg/L	NT	NT
Heptachlor Epoxide	μg/L	NT	NT
Lindane (gamma-BHC)	μg/L	NT	NT
Terbuthylazine	μg/L	NT	NT

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SWPCP 2-Jul-2007	SWPCP 2-May-2007
Pharmaceutically Active Compounds			
Caffeine	µg/L	ND	NT
Carbamazepine	µg/L	ND	NT
Carisoprodol	µg/L	ND	NT
Gemfibrozil	µg/L	0.030	NT
Ibuprofen	µg/L	0.70	NT
Naproxen	µg/L	0.040	NT
Radioactives			
Alpha Gross	pCi/L	NT	NT
Beta Gross	pCi/L	NT	NT
Radium 228	pCi/L	NT	NT
Surfactants			
AP/APEO, Halogenated	µg/L	ND	NT
AP1EO	µg/L	ND	NT
AP2EO	µg/L	ND	NT
AP3EO	µg/L	ND	NT
APEC m/z 235	µg/L	3.6	NT
APEC m/z 249	µg/L	0.39	NT
APEC m/z 279	µg/L	1.7	NT
APEC Total	µg/L	5.7	NT
APEC, Halogenated	µg/L	1.2	NT
APEO Total	µg/L	ND	NT
NP/OP	µg/L	ND	NT
Surfactants	µg/L	NT	NT
Trihalomethanes			
Bromodichloromethane	µg/L	NT	NT
Bromoform	µg/L	NT	NT

Notes:

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Table I-2-2
RECLAIMED WATER CHEMISTRY

Parameter	Location Date Units	SWPCP 2-Jul-2007	SWPCP 2-May-2007
Trihalomethanes			
Chloroform	µg/L	NT	NT
Dibromochloromethane	µg/L	NT	NT
Trihalomethanes, Total	µg/L	NT	NT

Notes:

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Table I-2-3
SODIUM ADSORPTION RATIO

Location	Date	Calcium mg/L	Sodium mg/L	Magnesium mg/L	SAR
PARWQCP	30-Jul-2002	45	209	33	5.8
PARWQCP	26-Jun-2007	45	206	31	5.8
SCRWA	29-Nov-2001	41	147	27	4.4
SCRWA	30-Oct-2001	48	128	28	3.6
SCRWA	26-Mar-2002	49	138	32	3.8
SCRWA	30-Jul-2002	50	141	30	3.9
SCRWA	25-Jan-2005	54	118	35	3.1
SCRWA	19-Jun-2007	52	147	31	4.0
SJ/SC WPCP	30-Oct-2001	48	143	27	4.1
SJ/SC WPCP	26-Mar-2002	55	149	33	3.9
SJ/SC WPCP	30-Jul-2002	49	156	27	4.4
SJ/SC WPCP	25-Jan-2005	69	152	30	3.8
SJ/SC WPCP	18-Jun-2007	56	149	31	4.0
SWPCP	30-Oct-2001	51	201	37	5.2
SWPCP	26-Mar-2002	53	165	37	4.3
SWPCP	30-Jul-2002	54	165	37	4.2
SWPCP	26-Jan-2005	54	143	39	3.6
SWPCP	26-Jun-2007	56	210	42	5.2

Notes:

SAR - Sodium Adsorption Ratio
PARWQCP - Palo Alto Regional Water Quality Control Plant
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Volume II
Soil Attenuation Model and Bench Test

Recycled Water Irrigation and Groundwater Study
Santa Clara and Llagas Groundwater Subbasins
Santa Clara County, California

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TABLE OF CONTENTS

LIST OF FIGURES .... II-iv
LIST OF TABLES .... II-vii
LIST OF APPENDICES .... II-viii
LIST OF ACRONYMS AND ABBREVIATIONS .... II-ix
EXECUTIVE SUMMARY II-ES-1

1. INTRODUCTION 1
   1.1. Introduction 1
   1.2. Purpose 1

2. SOIL ATTENUATION MODEL 3
   2.1. Introduction 3
   2.2. Inputs 4
      2.2.1. Geometry and Time Information 4
      2.2.2. Soil Hydraulic Model 5
      2.2.3. Constituent Transport 5
      2.2.4. Soil Parameters 5
      2.2.5. Constituent Parameters 6
      2.2.6. Boundary Conditions 7
      2.2.7. Root Water Uptake 8
   2.3. Results 8
      2.3.1. Bromodichloromethane 9
      2.3.2. Chloroform 9
      2.3.3. m-Xylene 10
      2.3.4. NDMA 10
   2.4. Sensitivity Analysis 10
      2.4.1. Henry's constant 11
      2.4.2. Adsorption Isotherm 11
      2.4.3. Water Transport Models 12
      2.4.4. Molecular Diffusion 12
      2.4.5. Bulk Density 13
      2.4.6. Heterogeneity in Soil Profile 13
   2.5. Conclusions 14

3. SOIL CORE BENCH TEST 16
   3.1. Introduction 16
   3.2. Methodology 16
      3.2.1. Soil Cores 16

3.2.2. Soil Core Section Selection 17
3.2.3. Remolding 18
3.2.4. Use of Gypsum 19
3.2.5. Water Sources 19
3.2.6. Bench Test Procedures 21
3.2.7. Analytical Laboratories 22
3.2.8. Hydraulic Conductivity 22
3.2.9. X-ray Diffraction 23
3.2.10. Soil Core Descriptions 23
3.2.10.1. SJSC-A 24
3.2.10.2. SJSC-B 25
3.2.10.3. SJSC-C 25
3.2.10.4. SJSC-D 26
3.2.10.5. SCRWA-A 26
3.2.10.6. SCRWA-B 27
3.2.10.7. SCRWA-C 27
3.2.10.8. SCRWA-D 28
3.2.10.9. DI-A 28
3.2.10.10. DI-B 29
3.2.10.11. DI-C 30
3.3. Results 30
3.3.1. Physical Results 30
3.3.1.1. Sieve Analysis and Hydrometer Test 30
3.3.1.2. Hydraulic Conductivity 31
3.3.1.3. X-ray Diffraction of Clay Minerals 32
3.3.2. Chemical Results 33
3.3.2.1. General Water Quality 34
3.3.2.2. Anions and Cations 37
3.3.2.3. Nutrients 44
3.3.2.4. Anthropogenic Compounds 46
3.4. Quality Control 57
3.4.1. Distilled Water Core Samples 57
3.4.2. Field Duplicate 58
3.4.3. Ion Balance Check 58
3.4.4. Flags 59
3.4.4.1. “C” 59
3.4.4.2. “Q5” 59
3.4.4.3. “O-04” and “O-09” 60
3.4.4.4. “M2” 60
3.4.4.5. “L3” 60
3.5. Conclusions 61
3.5.1. Soil Hydraulic Conductivity 61

3.5.2. Constituent Attenuation 62

4. CONCLUSIONS 64
4.1. Summary of Constituent Risk to Groundwater 64
4.2. Comparison Between Model and Bench Test 66
4.3. Recommendations for Pilot Study 67

REFERENCES 68

FIGURES
TABLES
APPENDICES

LIST OF FIGURES

FIGURE NO.	TITLE
II-2-1A	Concentration Curve: Bromodichloromethane in Sand
II-2-1B	Concentration Curve: Bromodichloromethane in Silt
II-2-1C	Concentration Curve: Bromodichloromethane in Clay
II-2-2A	Concentration Curve: Chloroform in Sand
II-2-2B	Concentration Curve: Chloroform in Silt
II-2-2C	Concentration Curve: Chloroform in Clay
II-2-3A	Concentration Curve: m-Xylene in Sand
II-2-3B	Concentration Curve: m-Xylene in Silt
II-2-3C	Concentration Curve: m-Xylene in Clay
II-2-4A	Concentration Curve: NDMA in Sand
II-2-4B	Concentration Curve: NDMA in Silt
II-2-4C	Concentration Curve: NDMA in Clay
II-2-5	Concentration Curve, Sensitivity of Henry's Constant
II-2-6	Concentration Curve, Sensitivity of Adsorption Isotherm, K_d
II-2-7A	Concentration Curve, Sensitivity of Model: Modified Van Gunechten Water Transport Model
II-2-7B	Concentration Curve, Sensitivity of Model: Brooks Corey (1964) Water Transport Model
II-2-7C	Concentration Curve, Sensitivity of Model: Kosugi (1996) Water Transport Model
II-2-8	Concentration Curve, Sensitivity of Molecular Diffusion in Air
II-2-9	Concentration Curve, Sensitivity of Molecular Diffusion in Water
II-2-10	Concentration Curve, Sensitivity of Bulk Density
II-2-11	Concentration Curve, Sensitivity to Heterogeneity of Soil Profile
II-3-1	Bench Test Drilling Locations: Santa Clara Groundwater Subbasin

II-3-2	Bench Test Drilling Locations: Llagas Groundwater Subbasin
II-3-3	Recycled Water Bench Test Flow Diagram
II-3-4	pH
II-3-5	Alkalinity as CaCO3
II-3-6	Bicarbonate Alkalinity as HCO3
II-3-7	Carbonate Alkalinity as CaCO3
II-3-8	Hydroxide Alkalinity as CaCO3
II-3-9	Total Dissolved Solids
II-3-10	Dissolved Organic Carbon
II-3-11	Total Organic Carbon (TOC)
II-3-12	ORP
II-3-13	Dissolved Oxygen (DO)
II-3-14	Total Boron
II-3-15	Potassium
II-3-16	Bromide
II-3-17	Total Cyanide
II-3-18	Calcium
II-3-19	Chloride
II-3-20	Sulfate as SO4
II-3-21	Magnesium
II-3-22	Sodium
II-3-23	Phosphate, Total as P
II-3-24	Nitrate as N
II-3-25	Nitrite as N
II-3-26	Bromodichloromethane
II-3-27	Bromoform
II-3-28	Chloroform
II-3-29	Dibromochloromethane
II-3-30	Total HAA5

II-3-31	Bromochloroacetic acid (bcaa)
II-3-32	Dibromoacetic acid (dbaa)
II-3-33	Dichloroacetic acid (dcaa)
II-3-34	Monobromoacetic acid (mbaa)
II-3-35	Monochloroacetic acid (mcaa)
II-3-36	Trichloroacetic acid (tcaa)
II-3-37	N-Nitroso dimethylamine (NDMA)
II-3-38	Terbuthylazine
II-3-39	Perfluoro butanoic acid (PFBA)
II-3-40	Perfluoro octanesulfonate (PFOS)
II-3-41	Perfluoro octanoic acid (PFOA)
II-3-42	NTA
II-3-43	EDTA
II-3-44	Surfactants (MBAS)
II-3-45	Perchlorate
II-3-46	Total Coliform
II-3-47	E. Coli
II-3-48	Fecal Coliform

LIST OF TABLES

TABLE NO.	TITLE
II-2-1	Parameter Specific Data
II-2-2	Sensitivity Analysis Input Data
II-3-1	Constituents of Concern
II-3-2	Physical Analysis Results
II-3-3	SJSC-A (fine-grained), Bench Test: Analytical Data
II-3-4	SJSC-B (semifine-grained), Bench Test: Analytical Data
II-3-5	SJSC-C (coarse-grained), Bench Test: Analytical Data
II-3-6	SJSC-D (fine-grained with gypsum), Bench Test: Analytical Data
II-3-7	SCRWA-B (semifine-grained), Bench Test: Analytical Data
II-3-8	SCRWA-C (coarse-grained), Bench Test: Analytical Data
II-3-9	SCRWA-D (fine-grained with gypsum), Bench Test: Analytical Data
II-3-10	DI-A (fine-grained), Bench Test: Analytical Data
II-3-11	DI-C (coarse-grained), Bench Test: Analytical Data
II-3-12	Sodium Adsorption Ratio

LIST OF APPENDICES

APPENDIX NO.	TITLE
II-A	Drilling Maps and Boring Logs
II-B	Sieve Analysis, Hydrometer Test, and Hydraulic Conductivity Test Report
II-C	X-Ray Diffraction Report
II-D	Chain of Custodies and Lab Reports for Analyses of Constituents

LIST OF ACRONYMS AND ABBREVIATIONS

ACRONYM	DESCRIPTION
1D	One dimensional
ARWT	Advanced Recycled Water Treatment
AWWA	American Water Works Association
BCAA	bromochloroacetic acid
Bgs	below ground surface
cm/sec	centimeter per second
DO	dissolved oxygen
DOC	dissolved organic carbon
DBAA	dibromoacetic acid
DCAA	dichloroacetic acid
EDTA	Ethylenediaminetetraacetic acid
HAA5	Group of five haloacetic acids (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, dibromoacetic acid)
HAA6	Group of six haloacetic acids (HAA5 and bromochloracetic acid)
HIM	Hydroxy-Interlayered 2:1 Mineral
HPC	heterotrophic plate count
K_d	Adsorption isotherm coefficient
LACSD	Los Angeles County Sanitation District
Locus	Locus Technologies
MBAA	monobromoacetic acid
MCAA	monochloroacetic acid
mg/L	milligrams per liter
MTBE	methyl tert butyl ether
NDMA	N-nitrosodimethylamine
NTA	nitrilotriacetic acid
ORP	oxidation reduction potential
PARWQCP	Palo Alto Regional Water Quality Control Plant

LIST OF ACRONYMS AND ABBREVIATIONS

PFBA	perfluoro butanoic acid
PFCs	perfluorochemicals
PFOA	perfluoro octanoic acid
PFOS	perfluoro octanesulfonate
SAR	Sodium Adsorption Ratio
SCRWA	South County Regional Wastewater Authority
SCVWD	Santa Clara Valley Water District
SJ/SC WPCP	San Jose/Santa Clara Water Pollution Control Plant
SWPCP	Sunnyvale Water Pollution Control Plant
TCAA	trichloroacetic acid
TDS	total dissolved solids
THMs	trihalomethanes
TOC	total organic carbon
TDS	total dissolved solids
VOCs	volatile organic compounds
µg/L	micrograms per liter

EXECUTIVE SUMMARY

Volume II of this report is on the second phase of the Recycled Water Irrigation and Groundwater Study.The overall goal of the study is to evaluate the potential impact to groundwater from expanded use of recycled water for irrigation in the Santa Clara and Llagas Subbasins. The two main components that are focused in Volume II include soil attenuation modeling and bench test.

Soil Attenuation Modeling

This component of the study used a one-dimensional numerical model to estimate the transport of recycled water and its constituents from the surface to the groundwater. HYDRUS-1D was selected as the numerical model. Four recycled water constituents were modeled in HYDRUS-1D including bromodichloromethane, chloroform, m-xylene, and N-nitrosodimethylamine (NDMA). Each constituent was modeled in three different soil types (sand, silt, and clay) and over three time frames (2 months, 2 years, 50 years). The results of the soil attenuation model of the four constituents are presented in Figures II-1-1 to II-2-4.

The behavior of concentration curves of the modeled constituents was exponential in shape. Concentrations decreased with respect to depth and most of the initial attenuation occurred in the first several feet of soil. As time progressed, the constituents saturate along the depth similar to a wave front. Generally, clay had the highest attenuation capacity followed by silt and sand with the exception of NDMA. NDMA migration in the model was more prominent in the clays than silt or sand. This is because the increased percent saturation of the clay in the model allows less opportunity for volatilization of NDMA.

The main process in the model that contributes to attenuation is the high sorption onto soil particles. Adsorption capacity is fixed and over extended contact with recycled water constituents, that capacity may be spent. Degradation and transformation into daughter products were mechanisms that were not included in the model that may also contribute to attenuation.

A sensitivity analysis was performed to evaluate the sensitivity of the model's input parameters. The analysis determines the most important parameters that affect the model's outcome. Constituent characteristics including Henry's constant, adsorption isotherm, and the molecular diffusion in air are factors that most significantly determine the solute's potential for migration to groundwater. In addition, soil type plays an important role in determining which solutes present greater threats to groundwater. The factors that did not significantly change the model results were molecular diffusion in water, bulk density, and choice of transport model.

Soil Core Bench Test

The bench test was used to simulate the subsurface fate and transport of the recycled water under conditions similar to those expected on sites where recycled water would be used for irrigation. Eleven soil cores (1 foot in length for fine grained and 2.3 to 3.8 feet in length for semi-fine and coarse grained) were selected for the bench test from borings collected from the Santa Clara and Llagas Subbasins. The irrigation sources included in the test were recycled water from the San Jose/Santa Clara Water Pollution Control Plant (SJSC WPCP), and the South County Regional Water Authority (SCRWA) Gilroy Plant. Distilled water plus a calcium chloride additive was used as a control irrigation source. Gypsum was also included as a test parameter for fine grained soils to simulate common field practice to increase permeability. A depiction of the process flow is shown in Figure II-3-3.

Influents (the two recycled water sources and distilled water) and effluents were monitored twice. The first sampling event was at first breakthrough and the second sampling event was after ten pore volumes and was intended to be more representative of long term conditions. A list of the constituents that were monitored is listed in Table II-3-1.

Irrigation of cores for the bench test began on June 9, 2008, and continued through October 8, 2008. Of the eleven soil core sections, six had adequate effluent to complete the analysis of all constituents of concern shown in Table II-3-1. Due to extremely low permeability, the remaining soil core sections were unable to yield sufficient sample volume to analyze for all constituents.

Part of the evaluation included a characterization of the soil samples by conducting several tests as part of the bench test. Sieve analysis and hydrometer tests were completed to provide grain distribution information; hydraulic conductivity tests were completed to provide information about the soil permeability; and x-ray diffraction tests were performed to evaluate the clay mineralogy. Results for sieve analysis and hydrometer test, hydraulic conductivity, and x-ray diffraction for the soil samples are shown in Table II-3-2. Samples with low initial hydraulic conductivity (by ASTM D-5084, Method C) include SJSC-A SJSC-B, SCRWA-A, SCRWA-B, and SCRWA-D having a range of 10^{-8} to 10^{-5} centimeters per second (cm/sec). These soils cores all contain a high percentage of fine grains. Samples with high initial hydraulic conductivity (by ASTM D-5084, Method C) include SJSC-D, SCRWA-C, DI-A, DI-B, and DI-C having a range of 10^{-5} to 10^{-2} cm/sec. These soil samples tend to have higher coarse grain content, although DI-A and SJSC-D are outliers which have relatively high silt content and high initial hydraulic conductivity. Due to high rock content, there was not sufficient material to evaluate the SJSC-C soil sample for hydraulic conductivity.

The x-ray diffraction indicated that major clay minerals present in the soil samples include smectite, kaolinite, vermiculite, chlorite, and mica. Quartz, hydroxyl-interlayered 2:1, feldspar were found in lesser amounts. Due to the higher abundance of smectite in the samples collected from the Llagas Subbasin, more clay expansion is expected there, compared to the Santa Clara Subbasin. Given that gypsum use in conjunction with irrigation is a common best management practice, clay expansion is not expected to contribute to soil aquifer plugging. However, in cases where gypsum is not applied, significant clay expansion can occur, which could reduce infiltration rates and cause surface ponding.

The addition of gypsum had a significant effect in increasing the hydraulic conductivity of recycled water through fine grained soil. This is evident as the fine grained soil cores without gypsum (SJSC-A and SCRWA-A) produced very little effluent water. The respective fine grained soil cores with gypsum applied (SJSC-D and SCRWA-D) produced enough effluent water enough to complete the sampling objectives. Comparison of initial to final hydraulic conductivity values in soil cores SJSC-D and SCRWA-D shows that the increase in hydraulic conductivity when gypsum is applied can range from two to five orders of magnitude.

Bacterial growth was present in almost all the effluent samples as shown in the HPC results. Bacterial growth may have contributed to a lower hydraulic conductivity. However, since the majority of the effluents contained a high concentration of HPC, it is unknown what contribution bacterial growth had on soil aquifer plugging.

Chemical results are shown in Tables II-3-3 to II-3-11. Those results are also presented in Figures II-3-4 to II-3-48. The monitored constituents for the bench test can be grouped into categories based on their observed potential to migrate through the soil cores with minimal changes in concentration.

For purposes of this study, a significant change is regarded as a 20% change or more in concentration. Constituents that exhibited significant (20% or more) attenuation across the soil column for a majority of the soil cores include potassium, phosphate, nitrate, THMs, and some haloacetic acids (BCAA, DBAA, and DCAA). Constituents that exhibited consistent significant increases after percolation through soil include nitrite and PFCs.

Constituents that have exhibited initial large increases in the first round of sampling followed by no significant changes in the second round of sampling include DOC, TOC, calcium, and magnesium. The behavior of these constituents is suspected to be a result of an initial leaching from the soil cores, followed by equilibration with the infiltrating water.

Alkalinity, pH, TDS, DO, boron, chloride, sulfate and sodium exhibited no significant changes after percolation through soil. NDMA also does not appear to be affected by the transport through soil, although concentrations were variable from the influent to the effluent concentrations. One of the haloacetic acids (TCAA) and EDTA did not show strong removal.

Constituents that have been inconclusive due to significant variation in the influent concentration or high potential for bacterial growth include surfactants, HPC, and coliforms. Surfactant concentrations observed minor decreases in the SJSC soil cores, and minor increases in the SCRWA soil cores. Bromide, cyanide, terbuthylazine, NTA, E. Coli, and perchlorate were not detected in the influent or effluent samples.

Conclusions

The potential threat of each constituent to groundwater was categorized into low, medium and high threat categories based on the results of the bench test and modeling. A summary of those conclusions is provided in the table below.

Constituents	**High Risk**		**Medium Risk**	**Low Risk**		
	1) have shown an increase rather than a removal from soil percolation in the bench test	2) have not shown short-term significant removal and are not typically present in groundwater	1) have not attenuated from percolation in the bench test or model, and 2) are typically higher in recycled water than in groundwater	1) have exhibited significant attenuation in the bench test or model	2) have not exhibited significant attenuation but are similar in concentration in reclaimed water and groundwater	3) have not been detected in any of the samples in the bench test
Nitrite/Nitrate	X					
PFCs	X					
EDTA		X				
HAA6		X				
NDMA		X				
Surfactants		X				
TDS			X			
Boron			X			
Chloride			X			
Sulfate			X			
Sodium			X			
TOC			X			
DOC			X			
THMs			X			
Phosphate				X		
Calcium					X	
Magnesium					X	
Potassium				X		
Bromide						X
Cyanide						X
Terbuthylazine						X
NTA						X

Constituents	**High Risk**		**Medium Risk**	**Low Risk**		
	1) have shown an increase rather than a removal from soil percolation in the bench test	2) have not shown short-term significant removal and are not typically present in groundwater	1) have not attenuated from percolation in the bench test or model, and 2) are typically higher in recycled water than in groundwater	1) have exhibited significant attenuation in the bench test or model	2) have not exhibited significant attenuation but are similar in concentration in reclaimed water and groundwater	3) have not been detected in any of the samples in the bench test
E. Coli						X
Perchlorate						X
other VOCs						X

Recommendations for the next phase of the study, the full-scale pilot study, include scaling back monitoring of low threat constituents. Monitored vadose zone wells should have shallow screens to monitor the depth range where a majority of the attenuation is expected to occur. The curvature of the concentrations along depth in the model indicates that the most drastic change in concentrations occurs in the first several feet of soil.

VOLUME II
SOIL ATTENUATION MODEL AND BENCH TEST
RECYCLED WATER STUDY

1. INTRODUCTION

1.1. Introduction

This report was prepared by Locus Technologies (Locus) on behalf of the Santa Clara Valley Water District (SCVWD) for the Recycled Water Irrigation and Groundwater Study. Volume II is the second phase of a study to evaluate the impacts from expanded use of recycled water for irrigation on groundwater resources in the Santa Clara and Llagas Groundwater Subbasins in Santa Clara County. This study uses a combination of approaches, including literature review, data analysis, a soil attenuation model, bench test, and a full pilot study at a site in the Santa Clara Groundwater Subbasin. This volume of the report will address the soil attenuation modeling and bench test. The next phase of the project is the full pilot study, the results of which are evaluated in conjunction with the conclusions gathered from the soil attenuation modeling and bench test.

1.2. Purpose

Volume II reports the results from two major evaluations: soil attenuation modeling and a soil core bench test. The purpose of the soil attenuation modeling is to use a numerical model (HYDRUS-1D) to estimate the transport of recycled water and the attenuation of its constituents from the surface to the groundwater. For this report, attenuation is defined as the reduction in concentration of a constituent through the soil, through any process such as sorption, volatilization, or degradation. Constituent migration is defined as the travel and rate of travel downward. Use of the model helps to evaluate potential impacts to groundwater from irrigation with recycled water under a wider range of variables than can be represented by the bench test or pilot study. The modeling results are also used to design the soil bench test and the following phase of this study, a full-scale pilot study using recycled water for irrigation. The goals for the soil attenuation model were identified as the following:

- Identify the range of attenuation from recycled water constituents with the greatest potential impacts to groundwater per the literature review;
- Investigate the effects of attenuation from different soil types (sand, silt, and clay);
- Determine the level of constituent attenuation with respect to depth and time; and
- Determine the sensitivity of the input parameters used in the modeling.

A soil core bench test is the second major component of the fate and transport evaluation. The bench test functions as a controlled environment for observing recycled water migration through soil samples. The purpose of the bench test is to characterize the attenuation of recycled water constituents through the soil, and also the effect of recycled water on the hydraulic conductivity of soil. To adequately represent the range of conditions observed within the project study area, the bench test used recycled water obtained from SJ/SC WPCP and SCRWA, and soil cores collected from multiple locations within the Santa Clara and Llagas Subbasins. The following goals were identified for the bench test:

- Determine the rate at which recycled water permeates through the varying soil samples relative to a control water source;
- Quantify the effects on soil hydraulic conductivity due to use of recycled water on a range of soils found within the project study area;
- Quantify the amount of attenuation through soil for a list of constituents present in recycled water that may negatively impact groundwater as determined Volume I of this report.

2. SOIL ATTENUATION MODEL

Recycled water commonly contains a number of constituents introduced through the original use of the water, or through the treatment processes that the water undergoes after use. The main focus of the study is chemical constituents, including those of anthropogenic and nonanthropogenic origins. A few constituents of concern are biological. The major goal of this study is to determine whether any of these constituents have the potential to negatively impact groundwater if recycled water is used for irrigation. In this section, the soil attenuation modeling and its application to this project are discussed.

2.1. Introduction

The goal of the attenuation model is to be able to characterize the fate and transport of the recycled water constituents through soil from the surface to groundwater. Four models were reviewed for this task, as discussed in Volume I of this report. Of the four models, HYDRUS-1D was chosen as the most suitable program, for its ability as a finite element model to simulate the movement of water and multiple constituents in a media that is variably saturated. For this task, a one dimensional (1D) model was chosen over a two or three dimensional model, because the model is intended to be representative of the entire project study area. 2D or 3D models for water infiltration would require customization for specific areas within the project study area and therefore the results would be less applicable to the entire area.

HYDRUS-1D is a one-dimensional public domain program. The model was developed jointly by scientists at the University of California at Riverside and the Agricultural Research Service division of the US Department of Agriculture. In HYDRUS-1D, the Richards equation is used for saturated-unsaturated water flow and the Fickian advection/dispersion equations are used for heat and constituent transport (Šimunek et al., 2005b).

2.2. Inputs

HYDRUS-1D requires representative input information for the model to adequately represent infiltration through the vadose zone. The input parameters include the soil depth and the time frame for which the model is run, the soil and constituent properties, and the water flow and constituent boundary conditions. Below is a further discussion of the input parameters.

2.2.1. Geometry and Time Information

A depth of 50 feet (15 meters) is selected for the model. Depth to first groundwater in the Santa Clara Subbasin ranges from 0 to more than 100 feet below ground surface (bgs). In the Llagas Subbasin, the depth to shallow groundwater varies from 10 to 100 feet bgs in the northeast region of the basin to less than five feet bgs near the Pajaro River. Because the model output reports a profile of concentrations at multiple depths, the concentration at any specific depth can be obtained by looking at specific points on the profile. Therefore, the model results are applicable for any depth to groundwater up to 50 feet. Since nearly all of the attenuation occurs within the upper few feet of the vadose zone, this scale was most appropriate for displaying the concentration changes over depth.

To evaluate the changes in recycled water infiltration over time, the time frame for the model was set from 0 to 50 years after commencement of application of recycled water. Snapshots of the model are taken at 2 months, 2 years, and 50 years to represent conditions at short, intermediate, and long time frames, respectively. The intermediate time step duration is similar to that of the pilot study, the next phase of the recycled water study and 2 months is the approximate duration between sampling events for the pilot study. Although in the real world, it is not absolutely certain that equilibrium will be established in the 50-year time frame, it is meant to represent the long term condition and is a best practical estimate. Soil parameters, recycled water application rate, and recycled water constituent concentrations are all assumed to be constant over the 50-year period.

2.2.2. Soil Hydraulic Model

For the soil hydraulics, the van Genuchten–Mualem equations are used. These equations for the hydraulic properties utilize the combination of the Mualem (1976) pore-size distribution model with the Van Genuchten (1980) soil-water-retention model. The model predicts the unsaturated hydraulic conductivity based on the water retention parameters. In addition, the model was assumed to have no hysteresis (no effects from wetting/drying cycles) as continuous irrigation is assumed in the modeling time frame. This assumption is a conservative estimate because irrigation with recycled water is not applied continuously through the day or during the seasonally wet months. Including the cyclic behavior of irrigation would introduce an additional widely variable parameter, and would reduce the interpretability of the results for the study area as a whole. The effect of the selection of this water transport model is evaluated in Section 2.4.3 below.

2.2.3. Constituent Transport

The Crank-Nicholson implicit scheme is applied to the model for time weighting. The Crank-Nicholson implicit scheme is recommended by the HYDRUS 1-D model documentation in lieu of other schemes. Although the fully implicit scheme may result in excessive numerical dispersion, explicit schemes are prone to numerical instabilities.

For space weighting, the method by Galerkin finite elements is used for approximating the spatial derivatives. This is the recommended space weighting method in the model.

Tortuosity in the molecular diffusion is accounted for by the model. Due to the presence of solid particles in the soil, diffusion paths do not keep straight lines. The tortuosity factor is applied for the molecular diffusion coefficients in the water and gas phases in accordance to Millington and Quirk (1961).

2.2.4. Soil Parameters

The model can be used for several types of soils. The examined soil types were sand, silt, and clay, which are taken to represent the range of vadose zone soils. Separate model scenarios were established for each of the soil types. Multiple layers of different soil types can be created in the model, but the model was simplified so that entire soil depth was one homogeneous type of soil. This provides a more general idea of the fate and transport through different soil types. In addition, a separate scenario was developed for the sensitivity analysis to observe the impact of heterogeneity of different soils on the model results.

Default soil properties included within the HYDRUS-1D model were used for each soil type. Soil property inputs include the residual soil water content, the saturated soil water content, saturated hydraulic conductivity, and the tortuosity.

Soil specific parameters include the bulk density and the longitudinal dispersivity. HYDRUS-1D recommends values for these parameters which are 94 pounds per cubic foot (pcf) (1,500,000 g/m^3) and 0.33 ft (0.1 meters), respectively. These values are typical for most soils and are not expected to vary significantly within the project study area. It is assumed that all sorption sites in the soil are in contact with the mobile water. It is also assumed that water transport is in physical equilibrium meaning that there is not any stagnant water in the soil column.

The model assumes the temperature of the environment to be 20 degrees Celsius throughout the depth of soil column. The temperature remains constant over time.

2.2.5. Constituent Parameters

Constituent specific parameters include the molecular weight, adsorption isotherm coefficient (K_d), Henry’s constant, and diffusion coefficients for free water and gas phase. Values for these parameters are available for some, but not all constituents of concern for this recycled water study. Therefore a subset of constituents with available data on their properties was selected for modeling. Sensitivity analysis on constituent parameters was performed (Section 2.4) to evaluate constituents for which these values are not available. The sensitivity analysis broadens the applicability of this model for other constituents.

Values of the adsorption isotherm coefficient (K_d), Henry’s constant, and diffusion coefficients were obtained through published values (Schwarzenbach et al, 2003; Alabama Dept of Env. Mgmt, 2008). Values of these parameters are shown in Table II-1-1.

To provide some range in chemical properties, four constituents were used for this model: bromodichloromethane, chloroform, m-xylene, and N-nitrosodimethylamine (NDMA). Bromodichloromethane and chloroform are disinfection by-products produced when water that contains organic matter is disinfected with chlorine or bromine. M-xylene is a one of three xylene isomers (m-xylene, p-xylene, and o-xylene). Xylenes are predominantly used as a solvent. NDMA is another disinfection by-product formed from the presence of monochloramine and simples amines. NDMA is frequently detected in municipal sewage and may be formed during wastewater disinfection when chlorine is applied in the presence of ammonia. The selection of these constituents for modeling was based on their presence in recycled water and the availability of information on their chemical properties. NDMA is frequently detected in recycled water. Bromodichloromethane, chloroform, and xylenes are less frequently detected in recycled water as explained in Volume I; however, the availability of the constituents' specific chemical characteristics made them appropriate selections for this evaluation. Further background discussion of these constituents may be found in Volume I of this report. HYDRUS-1D does not have the capability to model precipitation and dissolution reactions or constituent degradation in a manner that cannot be represented by first-order or second-order kinetics. Therefore, constituents with these characteristics (e.g. groundwater ions) cannot be modeled adequately using HYDRUS-1D.

While there is the potential for degradation of the constituents and/or transformation into daughter products, the model assumes that these processes are not occurring. The assumption is conservative for the constituents in recycled water.

2.2.6. Boundary Conditions

The upper boundary condition for water flow is set at a prescribed constant pressure head. The initial pressure head is -328 ft (-100 meters) to represent a soil that is unsaturated (pressure head below the bottom of the soil column). The lower boundary condition of the water flow is modeled as free drainage. Using this condition, any infiltrating water that migrates to the bottom of the modeled soil section flows into the groundwater. This condition is appropriate for a water table below the area of interest. For simplicity, the boundary conditions set for water flow are constant for the duration of the model. Considering the climate of the San Francisco Bay area, the seasonal weather patterns would expose the surface to higher volumes of water during short winter storm events in addition to routine irrigation water during the winter months. However, over the time periods used for this model, this fluctuation would be secondary to the water flow from irrigation.

Upper and lower boundary conditions of the constituent concentration are set at 100 mg/L as the concentration of the constituent in recycled water at irrigation and zero gradient (free drainage) at the end of the soil column. The concentration of the upper boundary condition is arbitrary as the model has been set to assume no degradation. In HYDRUS-1D, the transport factors are not dependent on concentration, except for degradation which is not included in this analysis. Hence, the model behavior is not affected by the actual concentration amount. For ease of interpretation, the concentration in the irrigation water was set at 100 mg/L, and therefore any concentrations modeled along the depth of the soil profile are effectively a percentage of the initial concentration in the irrigation water.

2.2.7. Root Water Uptake

The root water uptake was modeled using the Feddes (1977) water uptake reduction model. Under root water uptake the constituent is assumed to be left behind in the soil and only constituent-free solution is taken up to the roots. This assumption is valid because the modeled constituents are not known to be taken up by the plant root pathway. Root water uptake is modeled using Feddes' parameters for grass.

2.3. Results

Graphs showing the four constituent concentration profiles with respect to depth are presented in Figures II-1-1 to II-2-4. Each figure presents three concentration curves for the three time frames: 2 months, 2 years, and 50 years. For each of the four constituents modeled, three separate figures are presented that correspond to concentration curves in the three soil types modeled (sand, silt, and clay).

The concentration curves of the constituents may underestimate the actual attenuation, because constituent degradation and transformation were not included in the model. However, these factors are expected to be minimal for the selected constituents. The main process controlling the attenuation in the model is sorption to the soil particles. Because soil sorption is a process that becomes less effective over time as the soil becomes saturated with the constituent, it is expected that the constituent concentrations in the subsurface would eventually become consistent with the irrigated concentration over the long-term time frame. Clay appears to have the highest attenuation capacity except in the case of NDMA. Additional explanation for the modeled NDMA behavior is discussed in Section 2.3.4.

The curvature of the concentration profiles does not differ significantly between constituents. Each constituent has similar behavior with respect to the concentration profile and the progression of the concentration over time. NDMA appears to show the most attenuation of the evaluated constituents in sand and silt. In clay soils, m-xylene showed the most attenuation. These observations are reflective of the constituents' adsorption isotherm coefficients which govern the equilibrium of the constituent in soil and water. Of the four constituents, m-xylene has the highest adsorption isotherm coefficient. Transport behavior of the individual constituents is discussed below.

2.3.1. Bromodichloromethane

Bromodichloromethane concentration to depth curves are shown in Figures II-2-1A to II-2-1C. Bromodichloromethane demonstrates a significant level of attenuation in all soil types. The clay exhibited the most attenuation followed by silt and then sand. After a period of 50 years, the constituent is at near-zero concentration below a depth of 23 ft (7 meters) in the sand model. The behavior is expected because bromodichloromethane is a constituent with a relatively high adsorption coefficient. Its attenuation is dominated by the sorption by the soil particles.

2.3.2. Chloroform

Chloroform concentration to depth curves are shown in Figures II-2-2A to II-2-2C. Chloroform demonstrates significant attenuation in clay but limited attenuation in silt and sand. After 50 years in the sand and silt models, chloroform is transported beyond the modeled 50 feet (15 meters) of soil with 10 to 30 percent of the original concentration continuing to migrate downwards. In the clay model, the constituent shows a higher attenuation capacity than the other soil types. After 50 years, the constituent is at near-zero concentration at depth of 13 ft (4 meters) of clay and below. Compared to the other constituents, chloroform has a relatively low adsorption coefficient, high Henry's constant, and high diffusion of coefficient in air. The lower adsorption means there is less capacity for chloroform to be sorbed onto soil particles. In addition, the high Henry's constant and high diffusion of coefficient in air allows more volatilization of chloroform into the gas phase where it can migrate more effectively downwards through the vadose zone.

2.3.3. m-Xylene

Concentration to depth curves for m-xylene are shown in Figures II-2-3A to II-2-3C. Significant attenuation of m-xylene is demonstrated in all soil types, with the most attenuation in clay. In the silt and sand models, the concentrations are at near-zero concentrations at a depth of 10 ft (3 meters) after 50 years. In the clay model, concentrations of xylene do not significantly migrate beyond 3 ft (1 meter) after 50 years. Of the four constituents, m-Xylene has the highest adsorption coefficient. The high sorption contributes significantly to the attenuation of m-Xylene.

2.3.4. NDMA

NDMA concentration to depth curves are shown in Figures II-2-4A to II-2-4C. NDMA demonstrates significant attenuation in the soil types modeled. The highest attenuation was observed in the sand followed by silt and clay. The transport behavior of NDMA appears less influenced by sorption in the model compared to the other constituents, which corresponds to its lower adsorption isotherm coefficient. In clays, there is less opportunity for volatilization of NDMA due to higher percent saturation and less air-filled pores as opposed to silt or sand types of soils. Migration in clays is controlled by the downward migration of water. After 50 years, the constituent is at near-zero concentration below a depth of 13 ft (4 meters) in the soil types evaluated in the model.

2.4. Sensitivity Analysis

A sensitivity analysis was performed to evaluate the sensitivity of the model's input parameters. The analysis determines the most important parameters that affect the model's outcome. Input parameters were adjusted to observe the change in effect it would have on the constituent's attenuation. Parameters were adjusted to a range of potential values of the parameter. Many of these parameters are chemical properties.

In this case, the range in each chemical property was derived from a listing of properties for various constituents, which includes most of the known parameters for constituents in recycled water (Alabama Dept of Env. Mgmt, 2008). Table II-2-2 includes the minimum and maximum values for each of the chemical properties evaluated in the sensitivity analysis. The model for bromodichloromethane in a homogeneous sand layer was used as the baseline of this analysis. The baseline's constituent and soil type were arbitrarily chosen. However, any recycled water constituent and soil type would have been appropriate as a baseline for the purposes of this analysis, since the relative change in output is the same regardless of the starting conditions.

2.4.1. Henry's constant

Henry's law constant is an equilibrium constant for a constituent in its aqueous and gas phase. At constant temperature, Henry's law asserts that the concentration of a constituent in the gas phase is proportional to the concentration in the aqueous phase. A constituent with a higher Henry's constant has a higher affinity to the gas phase.

Henry's constant was adjusted to a minimum value of 1.27×10^{-7} (unit-less) and a maximum value of 4.00×10^{0}. The concentration curves of these results are shown in Figure II-2-5. Increasing Henry's constant decreased the attenuation of the constituent. This suggests that more volatile constituents are less likely to be attenuated. In the same respect, decreasing Henry's constant increases the constituent's attenuation in the soil. The explanation for this behavior is that the modeled soil is only partly saturated. Constituents with higher Henry's law constants can effectively migrate through air or water in the subsurface, whereas constituents with lower Henry's law constants are limited to migration through the aqueous phase. In addition, the lower concentration of the constituent in water allows for less adsorption onto soil particles.

2.4.2. Adsorption Isotherm

The adsorption isotherm, K_d, is used to express the equilibrium of the concentration of the constituent in the aqueous phase and the concentration of the constituent sorbed onto organic matter in the soil particles. A constituent with a high adsorption isotherm is has a higher affinity to adsorb to organic matter.

The adsorption isotherm was adjusted to a minimum value of 2.40×10^{-14} m^3/g and a maximum value of 8.80×10^{-3} m^3/g. The concentration curves of these results are shown in Figure II-2-6. As expected, increasing the adsorption isotherm significantly limits the migration of the constituent. In the same respect, decreasing adsorption isotherm significantly decreased the constituent's attenuation in the soil. In this model, adsorption to organic matter contributes significantly to the attenuation of constituents.

2.4.3. Water Transport Models

To evaluate the sensitivity of the selection of water transport model, three alternative models for water transport were applied, including modified van Gunechten, Brooks Corey (1964), and Kosugi (1996). The concentration curves of these results are shown in Figure II-2-7A through II-2-7C. These figures can be compared to Figure II-2-1A, which used the identical inputs for the originally selected water transport model (van Genuchten–Mualem). Of the four water transport models, only the Brooks Corey model shows any significant difference. The other three models have nearly identical results. The Brooks Corey model shows slightly greater attenuation than the other models. Since the results of the originally selected van Genuchten–Mualem model are matched by two other models, and are more conservative than the results from the Brooks Corey model, the original water transport model selection appears to be appropriate.

2.4.4. Molecular Diffusion

The molecular diffusion is the transport of molecules from a region of higher concentration to one of lower concentration. In the vadose zone, the rate of diffusion is proportional to the gradient of concentration. Diffusion of constituents occurs most rapidly in gases and less so in liquids. Diffusion through water may be limited by the saturation in the subsurface, because diffusion requires connected pore spaces filled with water. Conversely, diffusion through air is more effective in unsaturated soils.

The molecular diffusion in air was adjusted to a minimum value of 1.49×10^{-11} m^2/d and a maximum value of 1.30×10^{-1} m^2/d. The concentration curves of these results are shown in Figure II-2-8. Increasing the molecular diffusion in air significantly decreased the attenuation of the constituent. In the same respect, decreasing molecular diffusion in air significantly increased the constituent's attenuation in the soil. This behavior is expected because in the unsaturated zone, diffusion through air can be a significant transport mechanism particularly to highly volatile constituents. In this model, the molecular diffusion in air is a significant factor in the attenuation of constituents.

The molecular diffusion in water was adjusted to a minimum value of 1.04×10^{-5} m^2/d and a maximum value of 1.47×10^{-4} m^2/d. In general, values of the diffusion coefficient for water do not vary as significantly as the diffusion coefficient for air. The concentration curves of these results are shown in Figure II-2-9. Increasing and decreasing the molecular diffusion in water within this range did not significantly change the attenuation of the constituent.

2.4.5. Bulk Density

The bulk density of soil is the mass of the soil particles divided by the total volume occupied by the soil. Bulk density of soil is typically between 62 and 124 pcf. The bulk density was adjusted to this minimum and maximum value in the model to observe the effect on the results. The concentration curves of these results are shown in Figure II-2-10. Increasing the bulk density slightly increased the attenuation of the constituent. In the same respect, decreasing bulk density slightly decreased the constituent’s attenuation in the soil. Based on these observations, bulk density does not appear to significantly affect attenuation of constituent concentrations.

2.4.6. Heterogeneity in Soil Profile

The previous model scenarios were constructed as homogeneous sand, silt, or clay soil profiles. However, at most locations within the project study area, soil is heterogeneous with respect to depth and soil profiles are composed of layers of different soil types. To evaluate the potential effect of heterogeneity on the model results, a scenario was developed that included a distribution of soils in the subsurface.

The heterogeneous soil profile used in this scenario consisted of alternating 10-ft layers of sand and clay. The 0 to 10 ft, 20 to 30 ft, and 40 to 50 ft depths were layers of sand. The 10 to 20 ft and 30 to 40 ft depths were layers of clay. The concentration curve of this model is shown in Figure II-2-11. The bromodichloromethane exhibited a sharper decline in concentration at the 10 foot depth where a clay layer was introduced. This is expected as the clay exhibited a higher level of attenuation than the sand. Attenuation in this case is more prominent than in the case of sandy soil (Figure II-2-1A) and less prominent in the case of clayey soil (Figure II-2-1C).

2.5. Conclusions

The modeling shows that concentrations of some constituents are attenuated under certain simulated conditions of irrigation with recycled water with a modeled 50-foot vadose zone. The model verifies that constituents generally attenuate better in clayey soils than sandy or silty soils. Attenuation is most greatly achieved by constituents that have transport processes dominated by low volatilization and high sorption. Because the model is a closed system (i.e. constituents cannot be lost through escape to the atmosphere), volatilization may enhance the migration of a constituent downward. Constituents such as NDMA, which are relatively less prone to volatilization, may actually be transported more quickly through clayey soils. Beyond the 50-year time mark, the constituent concentrations will continue to progress towards the irrigated concentrations along the entire depth profile. This is because adsorption to organic matter has a fixed capacity, and given enough exposure to the constituent, the soil will eventually become saturated and sorption will essentially be nullified. However, on this time frame, the processes of degradation which were not considered in this model may be significant enough to prevent further migration. Degradation is an important element to the attenuation of recycled water. The level of degradation or transformation is different for each constituent. Evaluations on the contribution from degradation or transformation could not be made due to lack of available data for recycled water constituents.

The sensitivity analysis has shown that the model results are sensitive to certain input parameters. Constituent characteristics including Henry's constant, adsorption isotherm, and the molecular diffusion in air are factors that most significantly determine the constituent's rate of migration to groundwater. In addition, soil type plays an important role in determining which constituents present greater threats to groundwater. The molecular diffusion in water, bulk density, and choice of transport model did not significantly change the model results.

The model is useful as a tool for a preliminary evaluation of constituent transport through the vadose zone, but not appropriate for a detailed site specific evaluation because chemical characteristics are not known for many of the recycled water constituents. Reference values for chemical characteristics such as first-order degradation rate, diffusion coefficients, and so forth are generally limited.

Recommendations for the pilot study based on findings from the model are discussed in Section 4.3.

3. SOIL CORE BENCH TEST

Recycled water commonly contains a number of constituents introduced through the original use of the water, or through the treatment processes that the water undergoes after use. The main focus of the study is chemical constituents, including those of anthropogenic and nonanthropogenic origins. A few constituents of concern are biological. One major goal of this study is to determine whether any of these constituents have the potential to negatively impact groundwater if recycled water is used for irrigation. As one method to evaluate this potential, a bench-scale test was conducted using actual soil samples and recycled water in controlled laboratory conditions. In this section, the soil core bench test and its application to this project are discussed.

3.1. Introduction

The goal of the soil core bench test is to simulate the subsurface fate and transport of recycled water under conditions similar to those expected on sites where recycled water would be used for irrigation. The bench test serves as a controlled environment where the materials and parameters in the test are known. In this environment, recycled water from two different treatment plants and eleven soil cores are selected. By introducing recycled water at the top of the soil core, and measuring the quantity and concentrations of the effluent water at the bottom of the soil core, the estimated loading of each constituent to groundwater was estimated. The effects of the recycled water on the hydraulic conductivity of the soil were also calculated by comparing a final hydraulic conductivity where recycled water is applied to the soil cores and the initial hydraulic conductivity without exposure to recycled water by using ASTM method D-5084.

3.2. Methodology

3.2.1. Soil Cores

Soil cores were collected in eight locations throughout the Santa Clara and Llagas Subbasins. Four locations were selected in each subbasin, representing a geographic distribution over the areas where recycled water is currently being used and may be expanded in the future, and a range of surface soil types. The locations where the drilling occurred are shown in Figures II-3-1 and II-3-2. The IDT site, which is the location of the pilot study to be conducted in the next phase of this project, was one of the four locations in the Santa Clara Subbasin (location 3 on Figure II-3-1). The locations for the soil core collection were chosen within SCVWD easement and right-of-way areas throughout the Santa Clara and Llagas Subbasins.

At each location, two adjacent cores were collected. The first core was opened and logged onsite. The other was capped and saved for potential use as core sections for the bench test. Soil cores were taken from May 12 to 14, 2008. Cores were approximately 1.8 inches in diameter. Due to physical refusal at the drilling site, cores could not be extracted to the planned depth of 30 feet from locations SCV-2 and Llagas-1. Location SCV-2 was completed to a depth of 18 feet, and location Llagas-1 was collected to a depth of 12 feet. At two other locations, Llagas-2 and Llagas-3, a single 30-foot soil core was collected, but a second soil boring could not be collected due to damages to the drill tips. The soil at these locations was logged from the first boring by inspection through the transparent sleeve and at the open ends of each section. Boring logs for all locations are included in Appendix II-A.

3.2.2. Soil Core Section Selection

Of the eight soil cores collected, eleven sections from the undisturbed collected cores were selected for the bench test: three four-foot sections representative of coarse-grained soils, three four-foot sections representative of semi-fine-grained soils, and five one-foot sections representative of fine-grained soils. Four foot sections were the longest continuous sections that could be extracted by the drill rig. In some of these sections, particularly for loose soils, a full four feet of soil was not collected. Some amounts of loose soil were lost at the ends of the sections during lab setup.

Shorter sections of fine-grained soil were chosen for this test to allow more sample water to permeate through within the time frame of the study. Shortening the soil sections is expected to result in less constituent attenuation, however since the attenuation was expected to be higher for fine-grained soils, it could still be measured and evaluated over one foot lengths. The core sections were selected based on the adjacent logged core sections. The core sections representing each soil type were selected to be similar in grain size distribution.

For each selected core section, an additional six-inch segment was collected either directly above or below the section. The segment was analyzed for hydraulic conductivity (by ASTM D-5084) and grain size distribution using sieve and hydrometer analysis. Each segment was similar in composition to its respective soil core by visual inspection. Hydraulic conductivity values obtained from these sections were used to represent initial conditions of the soil prior to exposure to recycled water.

3.2.3. Remolding

In the process of collecting the soil cores through direct-push drilling, small channels were formed between the soil and the sleeve. The channels resulted from the use of a soil-trapping device at the end of the sleeve which is designed to minimize loss of soil as the core is extracted from the borehole. The cores could not be used for the bench test in this condition because the applied recycled water would flow through the channels along the side of the core instead of infiltrating slowly through the soil as would occur in the environment. To eliminate the open channels, each soil core was remolded prior to initiation of the bench test. The moisture content and density of each soil core were measured, and the soil was extracted and fitted into a new sleeve with no channels, maintaining the moisture and density of the original cores. This prevented side percolation as a preferential pathway for water between the soil core and sleeve and ensured that the migration time through the soil cores would be similar to conditions in the field. In the process of remolding, rocks larger than 3/8 inches were removed from the cores to prevent artificial void spaces within the soil cores and ensure a better fit within the sleeves. The remolding process is not expected to create additional preferential pathways or irregular grain distributions. The soil core lengths are expected to decrease slightly due to the removal of the larger sized rocks. However, the effective length of the soil core at which attenuation occurs remains the same because the rocks do not contribute significantly to attenuation. Because the moisture content and density were identical to the original cores, remolding is not expected to change the final hydraulic conductivity of the soil matrix.

3.2.4. Use of Gypsum

The application of gypsum (hydrated calcium sulfate) is commonly used to promote soil hydraulic conductivity which may affect constituent transport to groundwater, especially where recycled water is used for irrigation. Most often, gypsum is distributed on the soil surface in areas of fine-grained soil to improve soil hydraulic conductivity. Because the use of recycled water for irrigation is often accompanied by the use of gypsum to prevent adverse effects to the soil hydraulic conductivity, gypsum is included as an important variable to analyze for the bench test. To measure the effects of gypsum use, an additional one-foot fine-grained soil core section was used to test each recycled water source used in the bench test with gypsum added. Adding gypsum affects soil by lowering the soil's Sodium Adsorption Ratio (SAR). A lower SAR prevents clay swelling. SAR and clay swelling are further discussed in Section 3.3.2.2. Because gypsum specifically affects the clays in soil, the most significant hydraulic conductivity impact due to gypsum application is expected in the fine-grained soil cores. Therefore, only the fine-grained soil cores were used to evaluate the effect of gypsum application. Approximately 0.4 grams of gypsum was applied evenly to the top of each of these sections. This value corresponds to the prescribed product application rate of 50 lb per 1000 square feet.

3.2.5. Water Sources

Two sources of recycled water were used for the bench test: the San Jose/Santa Clara Water Pollution Control Plant (SJ/SC WPCP), and the South County Regional Water Authority (SCRWA) Gilroy plant. SJ/SC WPCP services wastewater treatment to cities in the Santa Clara Subbasin including San Jose, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno. The SCRWA plant services wastewater treatment to cities in the Llagas Subbasin including Morgan Hill and Gilroy. These two plants cover the areas where recycled water expansion is most likely in the Santa Clara and Llagas Subbasins.

SJ/SC WPCP wastewater is treated in a three step process. Primary treatment takes place in large settling tanks removing 50 percent of the wastewater contaminants in a 24 hour process. Secondary treatment includes aeration and secondary clarifiers. The final step is tertiary treatment involving filtration through filter beds and then gaseous chlorine for disinfection. Pollutants and solid wastes removed from the three treatment steps are directed to anaerobic digesters. The SCRWA plant also treats wastewater in three steps. Primary treatment consists of bar screens and grit chambers which are aerated basins that remove heavy particles. Secondary treatment includes oxidation ditches and secondary clarifiers. The oxidation ditches have aerated and non-aerated zones. Tertiary treatment includes filtration using anthracite media filters and disinfection by sodium hypochlorite. Solids collected from the SCRWA treatment steps are dewatered by belt filter presses. Recycled water from both sources meets Title 22 regulations.

Distilled water was used as a third source, to represent a control for comparison. The control water in the influent monitoring is analogous to a field blank; the water is expected to be clean (no detections of contaminants). Effluent monitoring of the control water is expected to observe detections of some constituents as a result of leaching from the soil. Using the control, the contribution of potential leaching of constituents may be observed and measured. Distilled water was treated with calcium chloride ($CaCl_2$) in order to maintain an ionic strength similar to that of groundwater. The proposed dosage of the additive was 11.1 grams per 10 liters of distilled water. The additive was mixed with the distilled water prior to application on the soil column. Each water source was used on three soil core sections with different soil types: coarse-grained, semifine-grained and fine-grained.

Ideally, the influent water for the bench test would be directly obtained from the recycled water distribution system. However, it was not possible to maintain the bench test at a location where both recycled water sources could be plumbed directly to the bench test. Therefore, recycled water was collected in batches from each of the two source plants, and preserved as well as possible during the execution of the bench test. Recycled water was collected twice from each plant in order to refresh the source water midway through the test. The first sample of each source was collected on May 14, 2008. The second sample of each source was collected on June 12, 2008 to refresh the sources. During the bench test, the recycled water sources were maintained in closed opaque containers above the soil cores in an enclosed cabinet space with minimal exposure to air, to minimize volatilization and photodegradation. The influent sources were connected to the soil cores by plastic tubing, and the application of the influent sources was gravity-driven. Influent water sampling occurred simultaneously to effluent water sampling of the respective coarse grained core. The coarse grain core was selected as it was expected to produce effluent water before the semi-fine and fine grained core. Samples of the influent recycled water collected from the closed opaque containers throughout the bench test indicate that the influent water remained representative of the recycled water sources, and were consistent with previously measured values (see Volume I).

3.2.6. Bench Test Procedures

Figure II-3-3 presents a flow diagram for the bench test apparatus. Recycled water from the SJ/SC WPCP is paired with soil core sections derived from the Santa Clara Subbasin and recycled water from the SCRWA plant is paired with soil core sections derived from the Llagas Subbasin. Thus, each soil core is exposed to the corresponding recycled water source for that area.

Effluent water from each core was monitored twice during the bench test. The first sampling event occurred at first breakthrough for each core section. The second sampling event for each core started immediately after completion of the first sampling event. The separation between the first and second sampling for a given constituent was 8.2 liters; this volume is the combined sample volume requirement for all of the constituents to be tested (Table II-3-1). Based on the measured pore volumes for each core, 8.2 liters equates to 9.3 to 40 pore volumes based on the porosity of the soil cores. A pore volume refers to the total amount of void space in the soil column. A higher pore volume between sampling of a constituent was desired so that changes in attenuation over time could be observed. As more pore volumes of recycled water are passed through the soil core, the system better represents longer term conditions. Due to the different hydraulic conductivity of each soil, sampling events for each core did not occur at the same time.

Sample bottles were filled for each analysis in a specific order prioritized by a constituent of concern list shown in Table II-3-1. The constituents to be monitored in the bench test were selected based on their potential to be present in recycled water and their potential to negatively impact groundwater. This evaluation was conducted in the previous phase of this project (see Volume I of this report). Aldicarb sulfoxide, PHaCs, NDCs, NBBS, and trisphosphates which were recommended for further monitoring from Volume I were not included in the bench test as a commercial laboratory to test for these constituents could not be identified. While these constituents were not monitored, the constituents that were part of the monitoring plan in the bench test are of a wide characteristic range that confidently represents recycled water. VOCs, which were not recommended for further monitoring in Volume I, were included in the bench test because the VOCs are a part of the analysis (EPA 8260B) that also analyzes THMs. In addition, bromide was included in the sampling list as a tracer.

During sampling, sample bottles were filled as the volume of the effluent water reached the required volume for the next analysis. Six out of the eleven soil cores sections completed the full sampling objectives. Due to extremely low final hydraulic conductivity, the remaining soil core sections were unable to yield a complete sample for all constituents. Irrigation of cores for the bench test began on June 8, 2008, and continued through October 8, 2008.

During the bench test, all portions of the apparatus were sealed to prevent exposure to air and light. Water sources were covered and effluent water was collected in amber glass jars to prevent volatilization and photodegradation. A record was maintained of the water volume that passed through each core section over time. Using Darcy's law and this information, the final hydraulic conductivity of each soil core section was determined during the bench test.

3.2.7. Analytical Laboratories

Laboratory analysis of the water samples were conducted by a combination of four laboratories: Weck Laboratories, MWH Laboratories, EMLab P&K, and Cranmer Analytical Laboratory. The specific laboratories performing each analysis and the corresponding analytical methods are listed in Table II-3-1.

3.2.8. Hydraulic Conductivity

Hydraulic conductivity tests were conducted to determine the effects of recycled water on soil permeability. Hydraulic conductivity of the soil was determined prior to recycled water application by ASTM D-5084, Method C: Falling Head, Rising Tailwater Elevation (herein referred to as initial hydraulic conductivity). The hydraulic conductivity of each soil sample was also estimated during the bench test using Darcy's Law and the recorded times and effluent volumes during the bench test (referred to as final hydraulic conductivity in this report). The main intent of the two sets of data on hydraulic conductivity is to compare the effect of the water source (recycled water versus control water) on the hydraulic conductivity of the soil. The hydraulic conductivity data is also used to compare between different soil cores for each recycled water source.

3.2.9. X-ray Diffraction

To evaluate the potential correlation between initial hydraulic conductivity by ASTM D-5084 and the clay mineralogy of each soil core, samples of each soil core section were analyzed by x-ray diffraction. Of the 11 soil core sections, samples from 10 of those sections were analyzed. Core section SJSC-C was a sample with high coarse grain content and very little fine grains. Due to the low amount of fine grains there was not enough material from that section to perform the diffraction analysis. X-ray diffraction was performed by the UC Davis laboratory at the Land, Air and Water Resources Department. Results of the x-ray diffraction analyses are discussed in Section 3.2.10 along with descriptions of the soil columns.

3.2.10. Soil Core Descriptions

Descriptions of each of the eleven soil cores included in the bench test are provided below. Drilling locations for the Santa Clara Subbasin are shown on Figure II-3-1, and locations for the Llagas Subbasin are shown on Figure II-3-2. Full soil boring logs for each of the cores are included in Appendix II-A. Grain size and hydraulic conductivity analyses are provided in Appendix II-B. The table below provides some details of each soil core. The lengths of the cores are shorter due to some amounts of loose soil lost at the ends of the section. Note that the Santa Clara map location number 3 is the site of the pilot study.

Sample ID	Grain Category	Gypsum Applied?	Subbasin Derived	Map Location Number	Core Length (in)	Depth Extracted (ft)	Water Source Applied	Region type
SJSC-A	Fine	No	Santa Clara	3	12	20 - 24	SJSC WCPCP	Unconfined
SJSC-D	Fine	Yes	Santa Clara	3	12	20 - 24	SJSC WCPCP	Unconfined
SJSC-B	Semi-fine	No	Santa Clara	4	29	0 - 4	SJSC WCPCP	Unconfined
SJSC-C	Coarse	No	Santa Clara	2	28	4 - 8	SJSC WCPCP	Unconfined
SCRWA-A	Fine	No	Llagas	4	12	24 - 28	SCRWA	Confined

Sample ID	Grain Category	Gypsum Applied?	Subbasin Derived	Map Location Number	Core Length (in)	Depth Extracted (ft)	Water Source Applied	Region type
SCRWA-D	Fine	Yes	Llagas	4	12	24 - 28	SCRWA	Confined
SCRWA-B	Semi-fine	No	Llagas	4	33	4 - 8	SCRWA	Confined
SCRWA-C	Coarse	No	Llagas	2	29	0 - 4	SCRWA	Unconfined
DI-A	Fine	No	Santa Clara	1	12	16 - 20	Distilled Water	Confined
DI-B	Semi-fine	No	Llagas	3	46	20 - 24	Distilled Water	Unconfined
DI-C	Coarse	No	Santa Clara	4	34	12 - 16	Distilled Water	Unconfined

3.2.10.1. SJSC-A

SJSC-A is a 12-inch soil core of fine-grained material derived from an unconfined region of the Santa Clara Subbasin. The sample was extracted from between 20 and 24 feet depth at the IDT property located on Silver Creek Valley Road, San Jose (Boring SCV-3). This property was selected because it is the location for the pilot study conducted as the next phase of this project. For comparison with respect to gypsum application, SJSC-A and SJSC-D are soil cores derived from the same location and depth range. Source water used to irrigate this core was tertiary treated effluent from the SJ/SC WPCP.

X-ray diffraction of the clay minerals revealed the main composition of the clays to be, in order of decreasing percentages, kaolinite, vermiculite, smectite, and mica. Minor amounts (5 to 10%) of hydroxy-interlayered 2:1 mineral (HIM) and trace amounts (<5%) of quartz were also found. These results appear to be similar to those from the SJSC-D sample which were derived from the same section, which suggests that the results are reproducible. Of the clay minerals in major abundance, smectite is the most expansive. Vermiculite and mica can be expansive and kaolinite is generally nonexpansive (Nelson et al., 1997).

Due to the low final hydraulic conductivity with recycled water applied, very little effluent water was available from the SJSC-A soil core for chemical analysis. This resulted in incomplete analytical results as the collected volume of effluent water was sufficient only for analysis using handheld monitoring instruments (DO, ORP, pH, and chlorine). Due to the lack of water infiltration through the soil core, the soil acted as an effective physical barrier to recycled water infiltration within the time frame of the bench test (120 days). Bacterial growth may have also contributed to the reduced flow, although there was not enough effluent to test for bacterial growth.

3.2.10.2. SJSC-B

SJSC-B is a 29-inch soil core of semifine-grained material derived from an unconfined region of the Santa Clara Subbasin near the intersection of San Felipe Road and Bowery Lane, San Jose, CA (Boring SCV-4). The sample was extracted from between 0 and 4 feet depth from this soil boring. Source water used to irrigate this core was tertiary treated effluent from the SJ/SC WPCP.

X-ray diffraction of the clay minerals revealed the main composition of the clays to be, in order of decreasing percentages, kaolinite, mica, and vermiculite. Minor amounts (5 to 10%) of smectite and quartz were also found. Vermiculite and mica, which can be expansive, may have contributed to the lack of flow through SJSC-B. Kaolinite, which was the dominant clay mineral, is generally nonexpansive (Nelson et al., 1997).

Due to the low final hydraulic conductivity with recycled water applied, very little effluent water was available for chemical analysis. This resulted in incomplete analytical results as the collected volume of effluent water was sufficient only for analysis using handheld monitoring instruments (DO, ORP, pH, and chlorine). Due to the lack of water infiltration through the soil core, the soil acted as an effective physical barrier to recycled water infiltration within the time frame of the bench test (120 days). Bacterial growth may have also contributed to the reduced flow, although there was not enough effluent to test for bacterial growth.

3.2.10.3. SJSC-C

SJSC-C is a 28-inch soil core of coarse-grained material derived from an unconfined region of the Santa Clara Subbasin, near the intersection of Virginia Road and Bucknam Ave, Campbell, CA (Boring SCV-2). The sample was extracted from between 4 and 8 feet depth from this soil boring. Source water used to irrigate this core was tertiary treated effluent from the SJ/SC WPCP.

X-ray diffraction was not performed for this soil sample, because there was insufficient clay material for this analysis. Because of the relatively high final hydraulic conductivity of this core, both rounds of analytical sampling were completed within 203 hours.

3.2.10.4. SJSC-D

SJSC-D is a 12-inch soil core of fine-grained material derived from an unconfined region of the Santa Clara Subbasin, at the IDT site property, San Jose, CA (Boring SCV-3). The sample was extracted from between 20 and 24 feet depth from this soil boring. Gypsum was added to this soil core as described in Section 3.2.4. SJSC-A and SJSC-D are soil cores derived from the same location (SCV-3) and depth range (20 to 24 ft). Source water used to irrigate this core was tertiary treated effluent from the SJ/SC WPCP.

X-ray diffraction of the clay minerals revealed the main composition of the clays to be, in order of decreasing percentages, kaolinite, smectite, chlorite and mica. Minor amounts (5 to 10%) of vermiculite, hydroxy-interlayered 2:1 mineral (HIM), and quartz were also found. These results are similar to those from the SJSC-A sample which was derived from the same soil core section. Because of the relatively high final hydraulic conductivity of this core, both rounds of analytical sampling were completed within a 17.5 hour time frame. The quick percolation flow through the soil core is attributed to the addition of gypsum.

3.2.10.5. SCRWA-A

SCRWA-A is a 12-inch soil core of fine-grained material derived from a confined region of the Llagas Subbasin. The sample was extracted from between 24 and 28 feet depth from the soil boring collected near the intersection of Bolsa Road and Bloomfield Ave, Gilroy, CA (Boring Llagas-4). SCRWA-A and SCRWA -D are soil cores derived from the same location (Llagas-4) and depth range. Source water used to irrigate this core was tertiary treated effluent from the SCRWA treatment plant in Gilroy, CA.

X-ray diffraction of the clay minerals revealed the main composition of the clays to be, in order of decreasing percentages, smectite and kaolinite. Minor amounts (5 to 10%) of vermiculite and trace amounts (<5%) of quartz and mica were also found. These results are similar to those from the SCRWA-D sample which was derived from the same soil core section, which supports the reproducibility of the x-ray diffraction data. Smectite is highly expansive and likely contributed to the low flow through SCRWA-A. The kaolinite is generally nonexpansive.

Due to the low final hydraulic conductivity, effluent water did not completely migrate through the soil core within the time frame of the bench test (120 days). This resulted in no chemical analytical results for the first or second event. The soil acted as an effective physical barrier to recycled water infiltration within the time frame of the bench test (120 days). Bacterial growth may have also contributed to the reduced flow, although there was not enough effluent to test for bacterial growth.

3.2.10.6. SCRWA-B

SCRWA-B is a 33-inch soil core of semifine-grained material derived from a confined region of the Llagas Subbasin near the intersection of Bolsa Road and Bloomfield Ave, Gilroy, CA (Boring Llagas-4). The sample was extracted from between 4 and 8 feet depth from this soil boring. Source water used to irrigate this core was tertiary treated effluent from the SCRWA treatment plant in Gilroy, CA.

X-ray diffraction of the clay minerals revealed the main composition of the clays to be, in order of decreasing percentages, smectite, kaolinite, mica, and vermiculite. Hydroxy-interlayered 2:1 mineral (HIM) and quartz were also found in trace amounts (<5%). Because of the relatively high final hydraulic conductivity of this core, both rounds of analytical sampling were completed within 63 hours potentially due to an overall lower percentage (11%) of clay in the soil.

3.2.10.7. SCRWA-C

SCRWA-C is a 29-inch soil core of coarse-grained material derived from an unconfined region of the Llagas Subbasin near the intersection of Church Ave and Llagas Ave, Morgan Hill, CA (Boring Llagas-2). The sample was extracted from between 0 and 4 feet depth from this soil boring. Source water used to irrigate this core was tertiary treated effluent from the SCRWA treatment plant in Gilroy, CA.

X-ray diffraction of the clay minerals revealed the main composition of the clays to be, in order of decreasing percentages, smectite, chlorite, and kaolinite. Minor amounts (5 to 10%) of mica, hydroxy-interlayered 2:1 mineral (HIM), quartz, and feldspar were also found. Although expansive type clays such as smectite comprised the majority of clay minerals in this soil, the overall percent composition of clay in the soil was very low (the associated soil sample used for the hydrometer test actually revealed zero percent clay). However, there was sufficient clay content to complete the x-ray diffraction analysis. Therefore, clay swelling did not significantly impede the water flow. Because of the relatively high final hydraulic conductivity of this core, both rounds of analytical sampling were completed in 6.4 hours.

3.2.10.8. SCRWA-D

SCRWA-D is a 12-inch soil core of fine-grained material derived from a confined region of the Llagas Subbasin near the intersection of Bolsa Road and Bloomfield Ave, Gilroy, CA (Boring Llagas-4). The sample was extracted from between 24 and 28 feet depth in this soil boring. Gypsum was added to this soil core as described in Section 3.2.4. SCRWA-A and SCRWA -D are soil cores derived from the same location and depth range. Source water used to irrigate this core was tertiary treated effluent from the SCRWA treatment plant in Gilroy, CA.

X-ray diffraction of the clay minerals revealed the main composition of the clays to be smectite and kaolinite, in order of decreasing percentages. Minor amounts (5 to 10%) of mica and vermiculite and trace amounts (<5%) of quartz were also found. Like soil core SCRWA-A, low flow would be expected but for the addition of gypsum. Because of the relatively high final hydraulic conductivity of this core, both rounds of analytical sampling were completed within 2.4 hours.

3.2.10.9. DI-A

DI-A is a 12-inch soil core of fine-grained material derived from a confined region of the Santa Clara Subbasin near the intersection of Tasman Dr. and Cisco Way, San Jose, CA (Boring SCV-1). The sample was extracted from between 16 and 20 feet depth from this soil boring. Source water used to irrigate this core was distilled water. This soil core had the lowest percentage of coarse-grained material of all eleven soil cores. Only 1.9 percent was categorized as sand, with silt (79.1%) and clay (19.0%) comprising the remainder.

X-ray diffraction of the clay minerals revealed the main composition of the clays to be chlorite and kaolinite, in order of decreasing percentages. Minor amounts (5 to 10%) of smectite, vermiculite, hydroxy-interlayered 2:1 mineral (HIM), and trace amounts (<5%) of quartz were also found. Although present only in relatively minor amounts, the smectite and vermiculite may have contributed to clay swelling, reducing flow through the soil core. Bacterial growth may have also contributed to the reduced flow, although there was not enough effluent to test for bacterial growth.

Due to low final hydraulic conductivity, very little effluent water was available for chemical analysis. This resulted in incomplete analytical results for the first and second event. The collected volume of effluent water was sufficient only for analysis using handheld monitoring instruments (DO, ORP, pH, and chlorine) over a 120-day time frame.

3.2.10.10. DI-B

DI-B is a 46-inch soil core of semifine-grained material derived from an unconfined region of the Llagas Subbasin near the intersection of Thomas Road and Oak Brook Way, Gilroy, CA (Boring Llagas-3). The sample was extracted from between 20 and 24 feet depth from this soil boring. Source water used to irrigate this core was distilled water.

X-ray diffraction of the clay minerals revealed the main composition of the clays to be smectite and vermiculite, in order of decreasing percentages. Trace amounts (<5%) of mica were also found. The smectite and vermiculite content likely contributed to clay swelling, resulting in almost no flow through this soil core. Bacterial growth may have also contributed to the reduced flow, although there was not enough effluent to test for bacterial growth.

Due to low final hydraulic conductivity, no effluent water completely migrated through the soil core within the time frame of the bench test (120 days). This resulted in no chemical analytical results for the first or second event.

3.2.10.11. DI-C

DI-C is a 34-inch soil core of coarse-grained material derived from an unconfined region of the Llagas Subbasin near the intersection of San Felipe Road and Bowery Lane, San Jose, CA (Boring SCV-4). The sample was extracted from between 12 and 16 feet depth from this soil boring. Source water used to irrigate this core was distilled water.

X-ray diffraction of the clay minerals revealed the main composition of the clays to be mica and kaolinite, in order of decreasing percentages. Minor amounts (5 to 10%) of smectite and quartz and trace amounts (<5%) of chlorite and feldspar were also found. Mica and smectite may have contributed to clay expansion but the overall percentage of clay in this soil was very low, resulting in a higher flow volume. Because this core was highly permeable, both rounds of analytical sampling were completed in 4.1 hours.

3.3. Results

The bench test was run from June 9, 2008 to October 8, 2008. Sampling for the bench test was completed between June 9, 2008 and July 7, 2008. Very little effluent water was obtained from July 7, 2008 to October 8, 2008, when the only cores that had incomplete sampling were the low-permeability soil cores.

3.3.1. Physical Results

Before and after the bench test, each soil core was analyzed for a series of physical parameters to quantify the grain size distribution, hydraulic conductivity, and clay mineralogy. Those results are discussed below.

3.3.1.1. Sieve Analysis and Hydrometer Test

Sieve analyses and hydrometer tests were used to provide grain distribution information of the soil samples. Results from the sieve analysis and hydrometer test are shown in Table II-3-2. The laboratory report of these analyses may be found in Appendix II-B. Fine-grained core samples, including SJSC-A, SJSC-D, SCRWA-A, SCRWA-D, and DI-A contained silt and clay ranging from 71.2 to 98.1 percent. Semifine-grained core samples including SJSC-B, SCRWA-B, and DI-B contained silt and clay ranging from 29.1 to 86.9 percent. Coarse-grained core samples including SJSC-C, SCRWA-C, and DI-C contained silt and clay content ranging from 4.9 to 10.7 percent. The categories presented in Table II-3-2 (fine, semi-fine, and coarse) were determined based on initial onsite inspection of borings and boring logs using the USCS classification system. Sieve analysis and hydrometer tests later yielded a different set of soil classifications although overall, the classifications were not extremely different. Revised USCS classifications from the sieve analysis and hydrometer test are presented in Table II-3-2 and applied in this study.

The core samples that yielded little to no effluent water were primarily samples with high silt and clay content. With the exception of DI-B, the silt and clay content of these cores ranged from 82.6 to 98.1 percent. The silt and clay content of DI-B is 29.1 percent, and the clay mineralogy of the DI-B sample was not notably different from the other samples collected from the Llagas Groundwater Subbasin, other than the absence of kaolinite. The clay fraction of sample DI-B was mainly composed of smectite followed by vermiculite.

3.3.1.2. Hydraulic Conductivity

Results for initial and final hydraulic conductivity are shown in Table II-3-2. The original lab report of the tests may be found in Appendix II-B. Final hydraulic conductivity values with recycled water applied could not be obtained for all soil cores. Soil cores that yielded little or no effluent volume can only be qualitatively evaluated. For those cores (SJSC-A, SJSC-B, SCRWA-A, DI-A, DI-B), an estimated maximum final hydraulic conductivity was calculated based on a single pore volume migrating through the core within the 120-day period of the bench test.

Samples with a relatively low initial hydraulic conductivity include SJSC-A, SJSC-B, SCRWA-A, SCRWA-B, and SCRWA-D having a range of 10^{-8} to 10^{-5} centimeters per second (cm/sec). Based on the sieve analysis and hydrometer test, these soils cores tended to contain a higher percentage of fine grains. Samples with higher initial hydraulic conductivity include SJSC-D, SCRWA-C, DI-A, DI-B, and DI-C having a range of 10^{-4} to 10^{-2} cm/sec. These soil samples tend to have higher coarse grain content, although DI-A and SJSC-D are outliers which have relatively high silt content and high hydraulic conductivity.

The initial hydraulic conductivity of SJSC-A and SJSC-D soil, which were derived from the same soil section, varied significantly. The hydraulic conductivity values are two orders of magnitude different (4.70×10^{-6} cm/sec for SJSC-A and 3.10×10^{-4} cm/sec for SJSC-D) which indicates that soil collected from the same core can be variable. However, SCRWA-A and SCRWA-D are derived from the same soil core section and the respective hydraulic conductivities are within the same order of magnitude of each other which indicates a more homogenous soil column.

The addition of gypsum greatly increased the hydraulic conductivity of the samples with exposure to recycled water. Fine soil cores with the added gypsum (SJSC-D and SCRWA-D) yielded sufficient effluent volume for both rounds of sampling events whereas the respective fine soil cores without gypsum (SJSC-A and SCRWA-A) did not. The final hydraulic conductivity of the soil cores with gypsum after recycled water application behaved more similarly to that of coarse grained soil cores, with final values of 1.40×10^{-2} and 8.15×10^{-2} cm/sec for SJSC-D and SCRWA-D respectively.

For soil cores that yielded sufficient water to complete the sampling events, the final hydraulic conductivity after recycled water application is greater than the results derived from the initial hydraulic conductivity by ASTM D-5084. The value of the final hydraulic conductivity after recycled water application during the bench test ranged from 10^{-3} to 10^{-1} cm/sec while initial hydraulic conductivity by ASTM D-5084 ranged from 10^{-7} to 10^{-3} cm/sec. This includes but is not exclusive to cores with gypsum applied. The difference between the two sets of hydraulic conductivity may be partially caused by the different methods used in determining hydraulic conductivity. The final hydraulic conductivity was not determined using the ASTM method, but rather the effluent volume measurements from the bench test. The final conductivity, however, does provide a realistic indication of the observed rate of water percolation.

3.3.1.3. X-ray Diffraction of Clay Minerals

The results of the diffraction of the clay minerals are shown in Table II-3-2 and the original UC Davis analysis report is found in Appendix II-C. Minerals found in main abundance include kaolinite, vermiculite, smectite (montmorillonite), mica, and chlorite. Comparing the samples from the two subbasins, the mineralogy from Llagas Subbasin is more dominated by smectite followed by kaolinite. By comparison, the soil samples from the Santa Clara Subbasin are more dominated by kaolinite. Quartz, which is not a clay mineral, and hydroxy-Interlayered 2:1 Mineral (HIM) were found in a majority of the samples but were found only in trace or minor amounts. Feldspar, which is also not a clay mineral, was found infrequently and in low amounts.

Of the common clays, smectite has the highest capacity for clay expansion followed by illite-vermiculite clays, followed by kaolinite clays (literature review in Volume I). Due to the higher abundance of smectite in the SCRWA samples, more clay expansion is expected in the SCRWA samples than the SJSC samples. Given that gypsum use in conjunction with irrigation is a common best management practice, clay expansion is not expected to contribute to soil aquifer plugging. However, in cases where gypsum is not applied, significant clay expansion can occur, which could reduce infiltration rates and cause surface ponding.

3.3.2. Chemical Results

This section discusses the analytical data of the constituents of recycled water that were observed. Chemical results discussed in this section may be found in Tables II-3-3 to II-3-11. In addition, charts graphically displaying the chemical results are provided in Figures II-3-4 to II-3-48. Original lab reports of the constituent analyses are found in Appendix II-D. Because this evaluation relies on comparison of concentrations in samples collected at the influent and effluent points of each soil core, it became necessary to determine what constitutes a significant reduction in concentration, as opposed to minor concentration differences caused by analytical variability. As a general guideline, concentration differences less than 20% will not be considered as a significant change for the purpose of this bench test. Variability within this range is expected to stem from the analytical procedures used in the bench test. The common level of expected precision for most laboratory analyses is 20%-25%. The actual percentage change is considered when making the comparison for each constituent, so this screening does not dismiss any observed changes in constituent concentrations. The 20% criterion is used only to identify and distinguish significant changes in concentration, as opposed to changes that may be caused by analytical variability.

Of the 11 sample cores, 6 cores yielded sufficient effluent volume to complete two sampling events (SJSC-D, SJSC-C, SCRWA-D, SCRWA-B, SCRWA-C, and DI-C). Cores SJSC-A, SJSC-B, and DI-A yielded only enough volume for a single partial sampling event for constituents that could be monitored by handheld instruments (including DO, ORP, pH, and residual chlorine). Cores SCRWA-A, and DI-B did not yield any effluent volume during the entire course of the bench test.

3.3.2.1. General Water Quality

Alkalinity and pH

The pH did not change significantly between recycled water influent and core effluent samples. Data for pH is graphed in Figure II-3-4. The pH of the recycled water sources were near neutral ranging from 7.3 to 8.1. The pH of the core effluent samples of recycled water ranged from 7.7 to 8.0. For the distilled water source, the influent pH was slightly more acidic, ranging from 6.5 to 7.0 and the effluent pH ranged from 7.3 to 7.9. Because the pH of groundwater is also near neutral, groundwater would not likely be affected due to the pH of these water sources.

Overall Minimum and Maximum Data for pH (pH units) in Soil Columns			
	SJSC	SCRWA	DI
Influent	7.3 - 8.0	7.5 - 8.1	6.5 - 7.0
Effluent	7.7 - 8.0	7.3 - 7.9	7.3 - 7.9

Alkalinity did not change significantly between recycled water influent and core effluent samples. Data for the total alkalinity is graphed in Figure II-3-5. Bicarbonate alkalinity was the main form of alkalinity present in the influent and effluent recycled water samples. Alkalinity as carbonate and alkalinity as hydroxide were at levels below detection in all samples. Data for the separate forms of alkalinity is graphed in Figures II-3-6 to II-3-8. In the control samples, alkalinity was not detected for influent distilled water. In the distilled water effluent samples, bicarbonate was detected as a result of percolation through soil. The total alkalinity in the distilled effluent water samples ranged from 9.5 to 32 mg/L as $CaCO_3$. The alkalinity in the distilled effluent water sample is likely to be a result of leaching from the soil.

Minimum and Maximum Data for Total Alkalinity as $CaCO_3$ (mg/l)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	160 - 190		240 - 250			ND 2.0 - ND 2.0
Effluent	180 - 180	180 - 200	220 - 340	230 - 240	240 - 240	9.5 - 32

Total Dissolved Solids

Total dissolved solids (TDS) concentrations did not change significantly between recycled water influent and core effluent samples. Data for TDS is graphed in Figure II-3-9. SJSC and SCRWA samples indicate that neither significant leaching (i.e. ion exchange) nor attenuation was occurring.

In the control cores, TDS was not detected in the influent distilled water. In the distilled water effluent samples, TDS was detected as a result of soil dissolving into the water from the influent with $CaCl_2$. TDS in the distilled effluent water samples ranged from 964 to 1360 mg/L. It is notable that these values are higher than the influent and effluent concentrations from the cores irrigated with recycled water. These TDS concentrations may have been caused by the addition of $CaCl_2$ to the distilled water source, which was done to make the ionic charge similar to that of groundwater. The influent distilled water was sampled before the addition of the $CaCl_2$. Hence the distilled influent indicates no detection in TDS and the interpretation of the results accounts for the addition of $CaCl_2$.

Flags that were encountered in the TDS results include the “C” flag. A discussion of the “C” flag is found in Section 3.4. Duplicate data indicate that the “C” flag did not significantly lower the quality of the data.

Minimum and Maximum Data for Total Dissolved Solids (mg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	649 - 690		714 (C) - 725			ND 10 - ND 10
Effluent	701 - 705 (C)	700 - 723 (C)	593 – 625	691 - 699 (C)	585 - 768 (C)	964 (C) - 1360

Dissolved and Total Organic Carbon

Data for dissolved and total organic carbon is graphed in Figures II-3-10 and II-3-11 respectively. In the first sampling round for most soil cores, dissolved organic carbon (DOC) and Total Organic Carbon (TOC) exhibited a large increase in the core effluent concentration. In the second round of sampling, the change in these parameters through the soil cores was low. The data suggest that the soil samples initially leached organic carbon into the water, which was observed in the initial sampled core effluent. By the second round, leaching of organic carbon subsided and effluent concentrations equilibrated to influent concentrations.

DOC and TOC were similar in concentration for SCRWA influent ranging from 4.0 to 4.4 mg/L. The effluent concentrations for SCRWA recycled water in the first sampling round ranged from 11 to 24 mg/L for DOC and 23 to 84 mg/L for TOC. In the second sampling round, the DOC and TOC effluent concentrations for SCRWA water samples ranged from 3.5 to 4.9 mg/L, similar to the influent concentrations. This behavior was also observed in the SJSC and DI samples.

SJSC-C, a coarse-grained soil core, is an exception because the effluent concentrations observed in the first and second sampling round exhibited no significant change. This soil core contained the highest percentage of coarse-grained material, and therefore it most likely did not contain significant organic carbon content.

Minimum and Maximum Data for Total Organic Carbon (TOC) (mg/l)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	6 - 6.9		4 - 4.2			ND 0.30 - ND 0.30
Effluent	5.9 - 6.7	6.4 - 50	4.3 - 23	4.3 – 84	4.9 - 35	0.68 - 44

Minimum and Maximum Data for Dissolved Organic Carbon (mg/l)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	5.9 - 7		4.1 - 4.1			ND 0.30 - ND 0.30
Effluent	6 - 6.2	6.3 - 37	3.5 - 11	4.4 – 24	4.3 - 16	0.53 - 13

Redox Potential and Dissolved Oxygen

Oxidation reduction potential (ORP) showed reduction in all soil cores. Data for ORP is graphed in Figure II-3-12. The ORP of both the SJSC and SCRWA recycled water samples ranged from +217 to +417 milliVolts (mV) for the influent and from +123 to +172 mV for the core effluent. In the control samples, the behavior is similar. The ORP of the distilled water ranged from +245 to +297 mV in the influent and from +132 to +195 mV in the effluent. ORP data suggest that there were not major shifts in redox conditions. Positive ORP indicates conditions that favor oxidation reactions such as with oxygen. Negative ORP indicates conditions that favor chemicals to be reduced.

Overall Minimum and Maximum Data for Oxidation Reduction Potential (mV)			
	SJSC	SCRWA	DI
Influent	221 - 417	217 - 230	245 - 297
Effluent	149 -171	123 - 172	132 - 195

Dissolved oxygen (DO) concentrations did not change significantly between influent and effluent recycled water samples. Data for DO is graphed in Figure II-3-13. The majority of the DO data of the recycled water sources for the influent and core effluent samples and control water ranged from 8.1 to 8.7 mg/L. The two exceptions to this case are SCRWA-B and DI-C. In the second sampling round, the SCRWA-B and DI-C effluents observed DO concentrations of 5.3 and 4.2 mg/L, respectively. Overall, the data indicates that the system maintained oxic conditions.

Overall Minimum and Maximum Data for Dissolved Oxygen (mg/L)			
	SJSC	SCRWA	DI
Influent	0.040 - 8.6	8.3 - 8.7	8.3 - 8.6
Effluent	8.3 - 8.6	5.3 - 8.5	4.2 - 8.7

3.3.2.2. Anions and Cations

Chloride

Chloride exhibited no significant change in concentration through any of the soil cores. Data for chloride is graphed in Figure II-3-14.

Chloride was not detected in the distilled water source, but was detected in the effluent. The presence of chloride in the effluent is likely caused by the addition of $CaCl_2$ to make the ionic charge of the distilled water source similar to groundwater. Chloride in the distilled effluent water samples ranged from 230 to 450 mg/L. The influent distilled water was sampled before the addition of the $CaCl_2$. Hence the distilled influent indicates no detection in chloride. The interpretation of the results accounts for the addition of $CaCl_2$. Further discussion of the quality control can be found in Section 3.4.

Minimum and Maximum Data for Chloride (mg/l)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	190 - 210		220 – 230			ND 0.50 - ND 0.50
Effluent	210 - 210	180 - 200	200 - 210	210 - 210	210 - 210	230 – 450

Sulfate

Sulfate generally exhibited no significant change in concentrations between influent recycled water and core effluent samples with the exception of SJSC-D and SCRWA-D. Data for sulfate is graphed in Figure II-3-15. SJSC-D and SCRWA-D, both fine grain soil cores with added gypsum, exhibited an increase in the first round of sampling followed by concentrations similar to the influent in the second round of sampling. With the exception of SJSC-D, SJSC influent and effluent samples remained similar ranging from 94 to 100 mg/L as SO_4. With the exception of SCRWA-D, SCRWA influent and effluent samples remained similar ranging from 81 to 95 mg/L as SO_4. The initial increase in sulfate in SJSC-D and SCRWA-D is likely a result of the sulfate introduced by the gypsum (hydrated calcium sulfate) as it was broken down into calcium and sulfate ions.

In the control samples, sulfate was not detected in the influent distilled water, but was detected in the effluent of the DI-C sample, as a result of leaching from the soil into the water. Sulfate in the distilled effluent water samples ranged from 3.0 to 5.3 mg/L as SO_4.

Minimum and Maximum Data for Sulfate as SO_4 (mg/l)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	94 - 100		81 - 82			ND 0.50 - ND 0.50
Effluent	100 - 100	97 - 140	89 - 92	89 - 92	95 - 130	3 - 5.3

Bromide

Bromide was below detection in the influent and effluent samples. The laboratory reporting limit is 0.50 mg/L. Data for bromide is graphed in Figure II-3-16.

Minimum and Maximum Data for Bromide (mg/l)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 0.50 - ND 0.50		ND 0.50 - ND 0.50			ND 0.50 - ND 0.50
Effluent	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50

Cyanide

Cyanide was below detection in the influent and effluent samples. The laboratory reporting limit is 5 µg/L. Data for cyanide is graphed in Figure II-3-17.

Minimum and Maximum Data for Total Cyanide (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 5.0 - ND 5.0		ND 5.0 - ND 5.0			ND 5.0 - ND 5.0
Effluent	ND 5.0 - ND 5.0	ND 5.0 - ND 5.0	ND 5.0 - ND 5.0	ND 5.0 - ND 5.0	ND 5.0 - ND 5.0	ND 5.0 - ND 5.0

Boron

Boron concentrations in influent and effluent samples were not significantly different, indicating that the soil cores had minimal effect on this constituent. Data for boron is graphed in Figure II-3-18. Boron in SJSC recycled water influent ranged from 440 to 480 µg/L and boron in the associated soil core effluents ranged from 430 to 440 µg/L. Boron in SCRWA recycled water samples ranged from 360 to 430 µg/L in the influent and 350 to 400 µg/L in the core effluent. In the control sample, boron was not detected in the influent distilled water. Boron was detected in the distilled water effluent, presumably as a result of soil leaching into the water. Boron in the distilled effluent water samples ranged from 16 to 66 µg/L.

Minimum and Maximum Data for Total Boron (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	440 - 480		360 - 430			ND 10 - ND 10
Effluent	430 - 440	430 - 440	400 - 400	350 - 360	370 - 380	16 - 66

Potassium

Potassium concentrations exhibited significant removal between recycled water influent and core effluent samples. Data for potassium is graphed in Figure II-3-19. Potassium in SJSC recycled water samples ranged from 15 to 17 mg/L in the influent and 9.3 to 12 mg/L in the soil core effluent. Potassium in SCRWA recycled water samples ranged from 27 to 32 mg/L in the influent and 1.1 to 24 mg/L in the effluent. In the SCRWA soil samples, the semifine-grained soil core exhibited the most removal of potassium and the fine-grained soil core with gypsum exhibited the lowest potassium removal.

In the control soil cores using distilled water, potassium exhibited an increase in concentration in the effluent samples likely as a result of concentrations in soil leaching into the water. Potassium in the distilled water influent ranged from below detection to 0.29 mg/L and the potassium in the associated effluent ranged from 0.98 to 1.7 mg/L. The concentrations observed in the control samples were lower than the concentrations observed in the samples with recycled water. Detections in the distilled water samples do not affect the interpretation of the results.

Minimum and Maximum Data for Potassium (mg/l)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	15 - 17		27 - 32			ND 0.10 - 0.29
Effluent	11 - 11	9.3 - 12	1.1 - 1.1	9 - 13	24 - 24	0.98 - 1.7

Calcium

In the first sampling round for the soil cores irrigated with SCRWA water, calcium increased significantly in the core effluent concentrations. By the second round, the effluent concentrations from these cores had dropped to levels similar to the influent concentrations. Data for calcium is graphed in Figure II-3-20. The data suggest that soil cores initially leached calcium into the water and later reached equilibrium. This was not the case for SJSC samples. Calcium in SJSC core effluent samples exhibited little to no change from the influent.

In the first sampling round, SCRWA soil cores had calcium concentrations ranging from 46 to 54 mg/L in the influent water samples and an effluent concentration range of 62 to 110 mg/L. Calcium in the second round SCRWA core effluent ranged from 51 to 55 mg/L, which was more similar to the influent concentrations. In the SJSC samples, the calcium concentrations ranged from 50 to 54 mg/L in the influent and from 51 to 57 mg/L in the effluent, resulting in no significant change. In the control soil core, calcium was not detected in the influent distilled water, but was detected in the effluent samples of distilled water after migration through the cores. The presence of calcium in the distilled water effluent samples is presumably the result of the $CaCl_2$ additive that was needed to make the ionic charge of the distilled water similar to groundwater. The influent distilled water was sampled before the addition of the $CaCl_2$. Hence the distilled influent indicates no detection in calcium. The interpretation of the results accounts for the additive of $CaCl_2$ and the confidence in the interpretation is not weakened. Further discussion of the quality control can be found in Section 3.4.

Minimum and Maximum Data for Calcium (mg/l)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	50 - 54		46 - 54			ND 0.10 - ND 0.10
Effluent	57 - 57	51 - 57	51 - 110	52 - 75	55 - 62	64 - 150

Magnesium

Magnesium exhibited a similar behavior to calcium. Concentrations of magnesium in the first sampling round exhibited an initial large increase in the core effluent concentration followed by an insignificant change in the effluent concentration on the second sampling round. Data for magnesium is graphed in Figure II-3-21. The data suggests that soil samples initially leached magnesium into the water, but by the second round, leaching of magnesium subsided and core effluent concentrations equilibrated to influent concentrations. This effect was more pronounced in the SCRWA soil cores than in the SJSC soil cores, although the influent concentrations were similar. This effect was not observed for SJSC-C as magnesium in SJSC-C effluent samples exhibited little to no change from influent concentrations. This is likely due to very low percentage of fine-grained material in the SJSC-C soil core, which resulted in high hydraulic conductivity and less opportunity for leaching.

Magnesium in SCRWA recycled water influent ranged from 27 to 32 mg/L. Magnesium in SCRWA recycled effluent water samples ranged from 34 to 71 mg/L in the first round and from 31 to 35 mg/L in the second round. Magnesium in SJSC recycled water influent ranged from 27 to 30 mg/L. For SJSC-D, the magnesium concentration in the core effluent was 41 mg/L in the first sampling round and 32 mg/L in the second sampling round. The effluent concentration for SJSC-C was consistently 26 mg/L throughout the bench test. In the control soil cores irrigated with distilled water, magnesium was not detected in the influent distilled water, but was detected in the effluent at concentrations ranging from 34 to 40 mg/L. Magnesium in the core effluent samples is interpreted to have been derived from the soil core.

Minimum and Maximum Data for Magnesium (mg/l)

	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	27 - 30		27 - 32			ND 0.10 - ND 0.10
Effluent	26 - 26	32 - 41	32 - 71	35 - 52	31 - 34	34 - 40

Sodium

With the exception of SCRWA-B and SCRWA-C, sodium concentrations exhibited little to no change between the influent and effluent recycled water samples. Data for sodium is graphed in Figure II-3-22. Sodium in SCRWA-B and SCRWA-C exhibited significant removal in the first round and little change in the second round. In the first round of sampling, sodium concentrations decreased from 140 mg/L to a core effluent concentration of 24 mg/L for SCRWA-B and 91 mg/L for SCRWA-C.

Sodium influent concentration in the SCRWA recycled water samples ranged from 140 to 160 mg/L. For SCRWA-B, the effluent sodium concentration was 24 mg/L in the first round and 140 in the second round. For SCRWA-C, the effluent sodium concentration was 91 mg/L in the first round and 140 mg/L in the second round. SCRWA-D exhibited little to no change with effluent concentrations of 140 mg/L in both rounds. Sodium concentrations in the SJSC core soil samples in the influent and effluent exhibited little change, consistently ranging from 120 to 140 mg/L. In the control sample, sodium was not detected in the influent distilled water. In the distilled water effluent samples, sodium was detected as a result of soil leaching into the water. Sodium in the distilled effluent water samples ranged from 14 to 150 mg/L. Sodium in the effluent samples is interpreted to have been derived from the soil cores.

Minimum and Maximum Data for Sodium (mg/l)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	130 - 140		140 - 160			ND 0.50 - ND 0.50
Effluent	130 - 140	120 - 130	24 - 140	91 - 140	140 - 140	14 - 150

Sodium Adsorption Ratio

The sodium adsorption ratio (SAR) describes the concentration of sodium relative to calcium and magnesium. A high level of SAR in the influent has the potential to cause clay expansion and reduce hydraulic conductivity. A decrease of SAR in the effluent suggests that sodium ions are replacing calcium and magnesium ions in the inter-particle clay surfaces, which causes clay expansion. A further background discussion of SAR may be found in Section 3.1 of Volume I of this report. SAR in the recycled water influents and soil core effluents are calculated and shown in Table II-3-12. In the soil cores irrigated with SCRWA recycled water, SAR decreased in all of the effluent samples. The SJSC recycled water influent had slightly lower SAR values, and the SJSC soil cores did not significantly affect the SAR values in the infiltrating water.

Soil aquifer plugging by clay expansion is most affected by soil with high clay content. Fine-grained soil cores including SJSC-A and SCRWA-A, which both contained smectite in the clay mineralogy in high abundance, may potentially have undergone clay expansion, although since neither of these cores yielded sufficient water for SAR analysis, this cannot be quantitatively evaluated. Soil cores SJSC-D and SCRWA-D, which also have high clay content but were treated with gypsum, did not significantly change the SAR value of the water. The other recycled water soil cores, including SJSC-C, SCRWA-B, and SCRWA-C, contained a low level of clay content which made these cores less susceptible to soil aquifer plugging. Clay content was 11 percent in SCRWA-B and approximately zero percent in SCRWA-C. In SJSC-C the silt and clay content was 8.2 percent. The influent SAR could not be evaluated in the DI source, as sodium, calcium and magnesium were not detected.

3.3.2.3. Nutrients

Phosphate, Total as P.

Phosphate exhibited significant decreases between influent and effluent samples. Data for phosphate is graphed in Figure II-3-23. In the first and second round of sampling, phosphate in SJSC recycled water samples ranged from 0.44 to 0.54 mg/L as P in the influent and ranged from 0.053 to 0.28 mg/L as P in the core effluent. The first and second round of sampling for the SCRWA samples produced phosphate in the recycled water that ranged from 3.9 to 4.6 mg/L as P in the influent and from below detection to 2.9 mg/L as P in the core effluent. SCRWA-D is an exception that exhibited a concentration of 18 mg/L as P in the second round in the effluent.

In the control soil cores, phosphate was not detected in the influent distilled water, but concentrations were detected in the effluent, presumably as a result of leaching from soil into the water. Phosphate in the effluent from the control soil cores ranged from 0.42 to 0.48 mg/L as P.

Minimum and Maximum Data for Phosphate, Total as P (mg/l)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	0.44 - 0.54		3.9 - 4.6			ND 0.050 - ND 0.050
Effluent	0.26 - 0.27	0.053 - 0.28	ND 0.050 - 0.32	0.46 - 2.3	2.9 - 18	0.42 - 0.48

Nitrate and Nitrite

Data for nitrate and nitrite is graphed in Figures II-3-24 and II-3-25 respectively. Nitrate concentrations decreased across most of the soil cores irrigated with recycled water. In some soil cores, nitrite concentrations increased from the initial influent concentrations. The SCRWA-C and SCRWA-D soil cores were exceptions. SCRWA-C observed little changes in nitrate or nitrite in influent and effluent concentrations in the first round, and SCRWA-D observed no significant change in the nitrite concentrations between the influent and effluent in the first round. Decreases in nitrate can occur as a result of transformation into nitrite and/or sorption to the soil. Given the limitations of the bench test, the individual contribution of each of these mechanisms cannot be determined. Flags that were encountered in the nitrite and nitrate results in the pilot study include the “O-04” and “O-09” flags. A discussion of these flag is found in Section 3.4. Although there is some reduced confidence in the qualified data, the data is still appropriately useful for comparative purposes and is therefore used for evaluation in this study.

Nitrate concentrations for the first and second round of sampling in the SJSC recycled water samples ranged from 7.6 to 9.6 mg/L as Nitrogen (N) in the influent and from below detection to 7.5 mg/L as N in the core effluent (SJSC-C and SJSC-D). Nitrate concentrations in the first and second round of sampling in the SCRWA recycled water influent samples were consistently 3.4 mg/L as N. Nitrate concentrations in the SCRWA core effluent samples ranged from below detection to 3.1 mg/L as N. Based on the first round of sampling, the SCRWA-C soil core observed no significant changes in nitrate concentrations between the influent and effluent samples.

Minimum and Maximum Data for Nitrate as N (mg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	7.5 – 9.6 (O-09)		3.4 – 3.4			ND 0.11 - ND 0.11
Effluent	7.4 (O-09)	ND 0.11 (O-09)	2.4 (O-09) – 2.7 (O-04)	3.1 (O-09)	ND 0.11 (O-09)	ND 0.11 (O-09)

Results of the nitrite concentrations are varied. Qualifiers in the data may explain some of the variations observed. Nitrite concentrations in the SJSC recycled water samples ranged from below detection to 1.7 mg/L as N in the influent and from 0.18 to 3.4 mg/L as N in the core effluent. Nitrite concentrations in the SCRWA recycled water influent samples were not detected. Nitrite concentration in the SCRWA-B core effluent sample was 0.23 mg/L as N in the first round and below detection in the second. In the first round, there were no detection for nitrite in the core effluent samples for SCRWA-C and SCRWA-D.

In the control soil cores irrigated with distilled water, nitrate and nitrite were not detected in any of the influent or effluent samples.

Minimum and Maximum Data for Nitrite as N (mg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 0.15 (O-09) – 1.7		ND 0.15 - ND 0.15			ND 0.15 - ND 0.15
Effluent	0.18 (O-09)	3.4 (O-09)	ND 0.15 (O-04) – 0.23 (O-09)	ND 0.15 (O-09)	ND 0.15 (O-09)	ND 0.15 (O-09)

3.3.2.4. *Anthropogenic Compounds*

Trihalomethanes (THMs)

In general, THM concentrations (bromodichloromethane, bromoform, chloroform, and dibromochloromethane) in the core effluents were significantly less than concentrations in the influent. Data for THMs is graphed in Figures II-3-26 to II-3-29. Reductions in THM concentrations were observed in the soil cores irrigated with SCRWA recycled water. Of the soil cores irrigated with SCRWA recycled water, semifine-grained soil and fine-grained soil with gypsum resulted in more reduced concentrations than the coarse grain soil core. Bromoform was consistently not detected in any of the SCRWA influent or effluent samples.

THMs in SJSC recycled water influent samples are highly varied. In general, THM influent concentrations in the first round were much higher than the influent concentrations in the second round. Effluent samples exhibited decreases in the first round of sampling and increases in the second round of sampling. However, the effluent concentrations from the SJSC soil cores remained relatively constant while the influent source sample concentrations decreased significantly in the second round of sampling. This observation suggests that the effluent water collected for the second round may have originated from the first round influent sample, delayed by the residence time in the soil core. Another possibility is that the elevated THM concentrations in the initial influent sorbed onto the soil, and later desorbed when it came into contact with the second round influent with lower concentrations.

Some THMs were found to be variable in the duplicate sample. In the SJSC second round influent sample, bromodichloromethane, chloroform, and dibromochloromethane concentrations were found to be significantly different (40 to 47 % difference) compared to the duplicate sample. The greatest numerical difference between the primary sample and the field duplicate was 1.1 µg/L for bromodichloromethane, 1.7 µg/L for chloroform, and 0.34 µg/L for dibromochloromethane. Hence, data comparisons (between influent and effluent data) cannot be confidently made for THMs where the difference is equal to or less than the given discrepancy (of primary sample and field duplicate) for that THM. Interpretations of comparisons of THMs with differences (between influent and effluent data) above the respective discrepancy can be made without reduction in the confidence.

In the control soil cores, THMs were not observed in any of the influent distilled water. THMs were not detected in the effluent samples except for chloroform. Chloroform was detected in the effluent samples ranging from 0.77 to 0.84 µg/L, possibly from cross contamination or from laboratory equipment (chloroform is a common constituent in tap water). Leaching of chloroform from the soil core was not expected. Confidence is reduced in data at or below 0.84 µg/L, however the chloroform concentrations in all other samples were above this value, therefore these low concentrations do not affect the interpretation of the data.

Minimum and Maximum Data for Bromodichloromethane (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	1.4 - 16		5.7 - 12			ND 0.50 - ND 0.50
Effluent	4.8 - 5.2	2.3 - 3.5	2.1 - 3.1	4.9 - 5	1.6 - 3.1	ND 0.50 - ND 0.50

Minimum and Maximum Data for Bromoform (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 0.50 - 1.3		ND 0.50 - ND 0.50			ND 0.50 - ND 0.50
Effluent	0.5 - 0.61	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50

Minimum and Maximum Data for Chloroform (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	1.9 - 13		21 - 40			ND 0.50 - ND 0.50
Effluent	6.6 - 6.7	2.8 - 4.2	9.1 - 16	18 - 20	6 - 14	0.77 - 0.84

Minimum and Maximum Data for Dibromochloromethane (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 0.50 - 7.8		1.2 - 2.6			ND 0.50 - ND 0.50
Effluent	2.5 - 2.9	1.3 - 1.9	ND 0.50 - ND 0.50	0.94 - 0.99	ND 0.50 - 0.59	ND 0.50 - ND 0.50

Haloacetic Acids (HAA6)

Effluent concentrations of HAA6, which include bromochloroacetic acid (BCAA), dibromoacetic acid (DBAA), dichloroacetic acid (DCAA), monobromoacetic acid (MBAA), monochloroacetic acid (MCAA), and trichloroacetic acid (TCAA), were mixed in results exhibiting increases and decreases for the core irrigated with SJSC recycled water samples. HAA6 were not detected in any of the influent or effluent samples for cores irrigated with SCRWA recycled water or distilled water. Data for haloacetic acids is graphed in Figures II-3-30 to II-3-36. In the tabulated analytical results, total HAA5 were reported which do not include BCAA.

In the SJSC recycled water samples, the individual influent concentrations of HAA6 varied significantly between the first round and second round of sampling. In the first round sampling, individual HAA6 were detected in the influent including BCAA, DBAA, DCAA, and TCAA. The data indicate variability in the influent concentrations with low and high concentrations found in BCAA, TCAA, and DBAA. Individual influent concentrations of HAA6 ranged up to 15 µg/L as observed for DCAA. Effluent concentrations of individual HAA6 remained constant between the first and second rounds for most cases. Of the individual HAA6, BCAA, DBAA, and DCAA demonstrated some attenuation through the soil cores, and TCAA demonstrated no attenuation at all. Overall, attenuation of HAA6 was not strongly observed in the data.

Minimum and Maximum Data for Bromochloroacetic acid (BCAA) (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 1.0 - 10		ND 1.0 - ND 1.0			ND 1.0 - ND 1.0
Effluent	4.8 - 6.3	ND 1.0 - 5.1	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0

Minimum and Maximum Data for Dibromoacetic acid (DBAA) (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 1.0 - 3.4		ND 1.0 - ND 1.0			ND 1.0 - ND 1.0
Effluent	1.8 - 2.7	ND 1.0 - 1.9	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0

Minimum and Maximum Data for Dichloroacetic acid (DCAA) (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	1.2 - 15		ND 1.0 - ND 1.0			ND 1.0 - ND 1.0
Effluent	6.4 - 7	2 - 9.6	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0

Minimum and Maximum Data for Monobromoacetic acid (MBAA) (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 1.0 - ND 1.0		ND 1.0 - ND 1.0			ND 1.0 - ND 1.0
Effluent	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0

Minimum and Maximum Data for Monochloroacetic acid (MCAA) (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 2.0 - ND 2.0		ND 2.0 - ND 2.0			ND 2.0 - ND 2.0
Effluent	ND 2.0 - ND 2.0	ND 2.0 - ND 2.0	ND 2.0 - ND 2.0	ND 2.0 - ND 2.0	ND 2.0 - ND 2.0	ND 2.0 - ND 2.0

Minimum and Maximum Data for Trichloroacetic acid (TCAA) (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 1.0 - 11		ND 1.0 - ND 1.0			ND 1.0 - ND 1.0
Effluent	12 - 12	12 - 14	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0	ND 1.0 - ND 1.0

N-Nitrosodimethylamine (NDMA)

NDMA concentrations in recycled water samples exhibited increases and decreases in the effluent samples. Data for NDMA is graphed in Figure II-3-37. In the SJSC recycled water samples, the influent concentrations of NDMA varied significantly ranging from 112 to 375 ng/L respectively. The effluent concentration of NDMA also varied highly, ranging from below detection to 327 ng/L. The presence of NDMA in the effluent samples at concentrations similar in magnitude to the influent concentrations suggests that there is limited, if any, attenuation of NDMA within the SJSC soil cores.

In the distilled water control sample, NDMA was observed ranging from 4.0 to 8.7 ng/L in the influent and from 7.8 to 8.6 ng/L in the effluent. It is suspected that detections of NDMA originated from the distilled water source and are not a result of sampling or handling procedure. In both rounds, trace amounts of NDMA were detected in the influent which supports distilled water as the origin of the

NDMA. Commercial distilled water was used for this test, which may not be as pure as laboratory-grade blank water. Given this information, it is unlikely that the NDMA analysis is affected in the other soil core samples that use recycled water as an influent source.

In the SCRWA recycled water samples, variability in the influent concentrations in the first and second round samples was low ranging from 4.0 to 4.1 ng/L. The variability in the SCRWA core effluent samples was high, ranging from below detection to 7.3 ng/L. NDMA concentrations in the SCRWA influent are consistent with previously observed concentrations as reported in Volume I of this report.

Minimum and Maximum Data for N-Nitroso dimethylamine (NDMA) (ng/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	112 - 375		4 - 4.1			4 - 8.7
Effluent	ND 2 - 327	139 - 211	2.5 - 4.3	6 - 7.3	ND 2 - 5.4	7.8 - 8.6

Terbuthylazine

Terbuthylazine was below detection in the influent and effluent samples. The laboratory reporting limit is 0.1 µg/L. Data for terbuthylazine is graphed in Figure II-3-38.

Flags that were encountered in the terbuthylazine results in the bench test include the “Q5” flag. A discussion of the “Q5” flag is found in Section 3.4. Duplicate data indicate that the “Q5” flag did not significantly lower the quality of the data.

Minimum and Maximum Data for Terbuthylazine (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 0.1 - ND 0.1		ND 0.1 - ND 0.1			ND 0.1 - ND 0.1
Effluent	ND 0.1 - ND 0.1	ND 0.1 - ND 0.1	ND 0.1 - ND 0.1	ND 0.1 - ND 0.1	ND 0.1 - ND 0.1	ND 0.1 - ND 0.1

Volatile Organic Compounds (VOCs)

VOCs (excluding THMs which are discussed above) were generally not detected in the influent or effluent samples. Figures were not prepared for VOCs, however, summary tables of detected VOCs in the bench test are displayed in this section. 2-Butanone was detected in high amounts in some of the core effluent samples and in the DI influent samples. The presence of 2-Butanone in these samples did not originate from the two recycled water sources as there were no detections in the samples from these sources. It is unlikely that 2-Butanone originated from the soil cores because the chemical was found in multiple effluent samples from different soil cores collected throughout the study area. Since 2-Butanone is not a basin-wide contaminant, it does not appear that the soil is the source. The source of the 2-Butanone (also known as methyl ethyl ketone or MEK) is suspected to be one of the ingredients in the glue used to assemble the bench test apparatus, and it is not a constituent of concern for this study. No other parameters were observed in such high amounts, which suggests that this issue is localized only to 2-butanone and that results of other constituents are not impacted.

Toluene, methylene chloride, and chloromethane were also found infrequently in the core effluent samples at levels near the reporting limit. The absence of these constituents in the influent or effluent samples from the control core indicates that these detections are not related to quality control issues. Rather, the data suggest that these low concentrations originated from the soil cores, although they were not detected in all soil core effluents. Since these compounds are not considered potential constituents of recycled water, these detections do not affect the interpretation of the results.

Minimum and Maximum Data for 2-Butanone (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 5.0 - ND 5.0		ND 5.0 - ND 5.0			ND 5.0 - 16
Effluent	54 - 2200	14 - 62000	ND 5.0 - 5.2	9.6 - 7300	ND 5.0 - 180000	160 - 6400

Minimum and Maximum Data for Toluene (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 0.50 - ND 0.50		ND 0.50 - ND 0.50			ND 0.50 - ND 0.50
Effluent	0.51 - 0.83	ND 0.50 - 0.96	ND 0.50 - ND 0.50	ND 0.50 - 0.5	ND 0.50 - 0.82	ND 0.50 - ND 0.50

Minimum and Maximum Data for Methylene chloride (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 0.50 - ND 0.50		ND 0.50 - ND 0.50			ND 0.50 - ND 0.50
Effluent	ND 0.50 - ND 0.50	ND 0.50 - 0.6	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50	ND 0.50 - 0.78	ND 0.50 - ND 0.50

Minimum and Maximum Data for Chloromethane (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 0.50 - ND 0.50		ND 0.50 - ND 0.50			ND 0.50 - ND 0.50
Effluent	ND 0.50 - ND 0.50	ND 0.50 - 0.61	ND 0.50 - ND 0.50	ND 0.50 - ND 0.50	ND 0.50 - 0.67	ND 0.50 - ND 0.50

Perfluorochemicals (PFCs)

The three PFCs monitored in this bench test were perfluorobutanoic acid (PFBA), perfluorooctanesulfonate (PFOS), and perfluorooctonoic acid (PFOA). PFCs were generally found at higher concentrations in the soil core effluent samples than in the influent recycled water samples, suggesting poor attenuation. Data for PFCs is graphed in Figures II-3-39 to II-3-41. PFBA and PFOS were not detected in any of the influent samples and were detected only in effluent samples of SJSC-C. The higher concentration of PFCs in the effluent may be the result of transformation from chemical precursors, which include various fluorinated alcohols and other fluorochemicals. Overall, attenuation was not well observed.

PFOA in SJSC recycled water samples ranged from below detection to 109 ng/L in the influent and from 73 to 325 ng/L in the core effluent. PFOA in SCRWA recycled water samples ranged from below detection to 39 ng/L in the influent and from 77 to 120 ng/L in the core effluent. For SJSC-C, PFBA was detected only in the effluent ranging from below detection to 940 ng/L and PFOS was detected only in the effluent ranging from 51 to 572 ng/L.

PFOA was found to be variable in duplicate samples. In the SJSC first and second round influent sample, PFOA was found to be significantly different from the respective duplicate samples (27 to 45%). The greatest numerical difference between the primary sample and the field duplicate was 29 ng/L for PFOA in the second round. Because the maximum variation was found to be 29 ng/L, data comparisons (between influent and effluent data) cannot be confidently made for PFOA where the difference is equal to or less than 29 ng/L. Interpretation of comparisons of PFOA with differences (between influent and effluent data) above the respective variation can be made without reduction in the confidence.

In the control sample, PFOA was the only detected parameter and was reported in the influent at 88 ng/L. PFOA was not detected in the effluent samples. Similar to NDMA, the appearance of PFOA in the influent is suspected to be of minor amounts that are in the DI source. Commercial distilled water was used for this test, which may not be as pure as laboratory-grade blank water. Given this information, it is unlikely that the PFC analysis is affected in the other soil core samples that use recycled water as an influent source. Cross contamination is not a likely cause since the concentration is too high relative to the other results. Analytical variability is not a likely cause since the observed changes in PFC concentrations are greater than the determined analytical variability of 29 ng/L.

Minimum and Maximum Data for Perfluorobutanoic acid (PFBA) (ng/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 50 - ND 50		ND 50 - ND 50			ND 50
Effluent	ND 50 - 940	ND 50 - ND 50	ND 50 - ND 50	ND 50 - ND 50	ND 50 - ND 50	ND 50 - ND 50

Minimum and Maximum Data for Perfluorooctanesulfonate (PFOS) (ng/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 50 - ND 50		ND 50 - ND 50			ND 50
Effluent	51 - 572	ND 50 - ND 50	ND 50 - ND 50	ND 50 - ND 50	ND 50 - ND 50	ND 50 - ND 50

Minimum and Maximum Data for Perfluorooctanoic acid (PFOA) (ng/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 20 - 109		39 - 39			88
Effluent	80 - 325	73 - 120	77 - 82	80 - 108	99 - 120	ND 20 - ND 20

Nitrilotriacetic acid (NTA) and Ethylenediaminetetraacetic Acid (EDTA)

EDTA concentrations in recycled water samples were varied in results, exhibiting increases in the SJSC recycled water samples and decreases in some of the SCRWA recycled water samples. NTA was below detection in all influent and effluent samples. The laboratory reporting limit for NTA is 100 µg/L. Data for NTA and EDTA are graphed in Figures II-3-42 and II-3-43 respectively.

EDTA concentrations in SJSC recycled water samples were below detection in the influent and ranged from 100 to 174 µg/L in the effluent, exhibiting an increase in concentrations. However, EDTA was found to be variable in the duplicate SJSC influent sample. The second round influent sample was below detection (laboratory reporting limit 100 µg/L), but the duplicate sample was 159 µg/L. Comparison of data may not be as strong for concentration differences that are 59 µg/L or less. EDTA in SCRWA recycled water samples ranged from 232 to 266 µg/L in the influent and from below detection to 242 µg/L in the effluent. Of the SCRWA soil samples, SCRWA-B exhibited the most removal of EDTA and SCRWA-D yielded no significant change in EDTA. Considering the variability in EDTA, attenuation appears to be limited.

In the distilled water control sample, EDTA was only detected in the second round influent sample at the reporting limit of 100 µg/L. This EDTA detection is within the range of potential analytical variability, but may also be attributed to the commercial distilled water source. The presence of EDTA in the distilled water source at this concentration does not significantly impact the findings for the other soil cores. NTA and EDTA were not detected in any of the control effluent samples.

Minimum and Maximum Data for EDTA (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 100 - 159		232 - 266			ND 100 - 100
Effluent	117 - 147	100 - 174	ND 100 - 121	ND 100 - 236	237 - 242	ND 100 - ND 100

Minimum and Maximum Data for NTA (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 100 - ND 100		ND 100 - ND 100			ND 100 - ND 100
Effluent	ND 100	ND 100 - ND 100	ND 100	ND 100	ND 100	ND 100

Surfactants

Surfactant concentrations in recycled water samples were varied in results exhibiting decreases in the first sampling round of the SJSC recycled water samples and increases in some of the SCRWA recycled water samples. Data for surfactants is graphed in Figure II-3-44. Surfactant SJSC influent concentrations were significantly varied between the first and second round of sampling.

Surfactants in SJSC recycled water influent sampling ranged from 0.21 mg/L in the first round to 0.11 mg/L in the second round. Surfactant SJSC effluent concentrations ranged from 0.090 to 0.12 mg/L. By comparing the influent to effluent samples, these concentrations decreased in the first round and remained relatively constant in the second round. Surfactant concentrations in the SCRWA recycled water influent ranged from below detection to 0.060 mg/L. The SCRWA-C and SCRWA-D soil cores exhibited a slight increase in surfactant concentrations, yielding concentrations ranging from 0.070 to 0.080 mg/L in the core effluents. SCRWA-B exhibited no change having effluent concentrations ranging from below detection to 0.060 mg/L. Surfactants were found to be variable in the SJSC duplicate influent sample. The second round effluent samples were below detection (laboratory reporting limit 0.05 mg/L) and 0.11 mg/L. Comparison of data may not be as strong for concentration differences that are 0.06 mg/L or less. Given the presence of surfactants in the effluent samples at concentrations similar in magnitude to the influent concentrations, attenuation of surfactants is interpreted to be limited.

In the distilled control soil cores, surfactants were not detected in the influent or effluent samples.

Minimum and Maximum Data for Surfactants (MBAS) (mg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 0.05 - 0.21		ND 0.05 - 0.06			ND 0.05 - ND 0.05
Effluent	0.1 - 0.12	0.09 - 0.1	ND 0.05 - 0.06	0.07 - 0.08	0.07 - 0.08	ND 0.05 - ND 0.05

Perchlorate

Perchlorate was below detection in all influent and effluent samples. The laboratory reporting limit is 4.0 µg/L. Data for perchlorate is graphed in Figure II-3-45.

Minimum and Maximum Data for Perchlorate (µg/L)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 4.0 - ND 4.0		ND 4.0 - ND 4.0			ND 4.0 - ND 4.0
Effluent	ND 4.0 - ND 4.0	ND 4.0 - ND 4.0	ND 4.0 - ND 4.0	ND 4.0 - ND 4.0	ND 4.0 - ND 4.0	ND 4.0 - ND 4.0

Pathogens

Due to the potential for bacterial growth within the soil cores, there was difficulty in evaluating the effect of soil attenuation on these parameters in the bench test format. Although an additive could have been used to inhibit bacterial growth within the cores, it was not applied because of the unknown effect it may have had on the other constituents monitored in the bench test. Data for total coliforms, E. coli., and fecal coliforms are graphed in Figures II-3-46 to II-3-48. Both influent and effluent values of HPC and total coliforms appeared to be affected by bacterial growth, including the distilled water control. Growth in the distilled water control may be a result of bacterial contamination. Factors that can affect the growth of coliform and HPC bacteria include filtration, temperature, disinfectant type and residual, assimilable organic carbon level, corrosion control and pipe material selection (LeChevalier, 2003). In this case, exposure to the organic content in the soil likely contributed to bacterial growth. Results that are affected only included HPC and total coliforms. Bacterial growth may have contributed in reducing the final hydraulic conductivity in the soil cores, although the magnitude of this effect could not be measured.

Fecal coliforms and E. coli which indicate fecal matter were not observed in the influent or effluent water samples with the exception of SJSC-D, where one of the effluent samples observed a fecal coliform concentration of 4 MPN/100mL.

Flags that were encountered in these results in the pilot study include the "C" flag. A discussion of the "C" flag is found in Section 3.4. Duplicate data indicate that the "C" flag did not severely lower the quality of the data.

Minimum and Maximum Data for Heterotrophic Plate Count (HPC) (CFU/mL)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	2 - 68090		24295 - 33635			935 - 16495
Effluent	1779500 - Too High	ND 1 - Too High	56550 - Too High	1763500 - Too High	308000 - Too High	30200 - Too High

Minimum and Maximum Data for Fecal Coliform (MPN/100mL)						
	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 2 - ND 2		ND 2 - ND 2			ND 2 - ND 2
Effluent	ND 2 - ND 2	ND 2 - 4	ND 2 - ND 2	ND 2 - ND 2	ND 2 - ND 2	ND 2 - ND 2

Minimum and Maximum Data for Total Coliform (MPN/100mL)

	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 2 - 9.0 (C)		ND 2 - ND 2			ND 2 - ND 2
Effluent	8 - 80	ND 2 - 21	ND 2 - ND 2	ND 2 - ND 2	2 - 7	ND 2 - 4

Minimum and Maximum Data for E. coli (MPN/100mL)

	SJSC-C	SJSC-D	SCRWA-B	SCRWA-C	SCRWA-D	DI-C
Influent	ND 2 - ND 2		Absent - Absent			Absent - Absent
Effluent	Absent - Absent	Absent - Absent	Absent - Absent	Absent - Absent	Absent - Absent	Absent - Absent

3.4. Quality Control

3.4.1. Distilled Water Core Samples

Distilled water was used as the water source for the control samples. Recycled water constituents were not expected to be detected in the distilled water samples. It was determined that the commercial distilled water used for the bench test was not a laboratory-grade clean water source. The distilled source water was found to have low concentrations of NDMA, potassium, EDTA, 2-butanone, and PFOA. Of these constituents, NDMA was detected in the distilled water influent for both sample events. The distilled water source is suspected to contain NDMA and PFOA in minor amounts. HPC was also observed in the distilled water source, which is attributed to bacterial contamination. 2-butanone and EDTA were not suspected to originate from the distilled water source. The concentrations of 2-butanone are suspected to be a result of contamination from the bench test equipment. However, since 2-butanone was not observed in any of the recycled water influent samples, it is not considered a constituent of concern for this study. EDTA observed in the distilled water is suspected to be a result of analytical variability.

In the DI-C soil core, some constituents revealed increases in concentration after percolating through the soil core in both events. This can occur as a result of leaching or dissolving of constituents already present in the soil and/or from the bench test equipment. These constituents which were found in the effluent samples include magnesium, potassium, sodium, boron, sulfate, phosphate, 2-butanone, chloroform, alkalinity, DOC, and TOC. Increases in the bacterial counts such as Total Coliforms and HPC were likely due to bacterial growth in the soil core. The appearance of 2-butanone is suspected to originate from the glue used to assemble the bench test apparatus. Low concentrations of chloroform in the effluent from the DI-C soil core are suspected to be the result of contamination from the bench test equipment. Soil leaching of inorganic constituents (such as magnesium, potassium, sodium, boron, sulfate, phosphate, alkalinity) and organic carbon from the soil was expected.

Distilled water influent sampling occurred before a $CaCl_2$ additive was applied. The purpose of the $CaCl_2$ additive was to make the ionic charge of the distilled water similar to groundwater. Although it is not known what the true concentrations of calcium, chloride, and TDS were in the distilled water influent, the interpretation of the results are made given this fact, and the confidence in the interpretation is not weakened. No other constituents, other than calcium, chloride, and TDS are expected to be influenced by the additive. Hence the quality of the distilled water of other constituents is not affected.

3.4.2. Field Duplicate

Field duplicate samples were collected from the SJSC recycled water source on both sampling events. Results for both analyses are shown on Table II-3-5. Comparing the duplicate samples, EDTA, Surfactants, THMs , PFOA, HPC, and Total Coliforms were observed to be significantly variable (over 25% difference). The evaluations for these constituents are made in light of the analytical variability, as discussed in the sections above. Additional laboratory qualifiers were applied to some values, as described on Tables II-3-3 to II-3-11. None of these additional qualifiers significantly affect the interpretation of the results.

3.4.3. Ion Balance Check

Ion balances were calculated for the influent and effluent to check for electroneutrality. Cations considered were potassium, sodium, calcium, and magnesium. Anions that were considered included bicarbonate, chloride, nitrate, nitrite, and sulfate. The majority of the ion balances were acceptable, having a cation to anion ratio between 0.90 and 1.10. Three ion balances were out of this range. These were 1st event SCRWA influent, 1st event SCRWA-B effluent and 2nd event DI-C effluent. The observed unbalanced ions may be due to the staggered nature of the sampling. Due to the time required to collect enough sample volume for analysis, sampling events could not be executed for all analyses at once. The concentration of the ion may have changed during the time delay. Instantaneous sampling of all ion concentrations was not possible with the configuration of the bench test. Overall, ion balances help verify the accuracy of ion concentrations in these samples.

3.4.4. Flags

Below is a discussion of the different flags that appeared in the bench test analytical data and any implications for the qualified data. Data qualified with the following flags is still considered for evaluation in this study, but may have reduced confidence depending on the type of data qualification.

3.4.4.1. "C"

The "C" flag indicates that the sample was analyzed beyond the holding time.

This flag was applied to results for the biological constituents in the SJSC source sample and TDS at several locations. These analyses have relatively short hold times (24 hours for biological analyses and 7 days for TDS). For all biological constituents with the "C" flag, a duplicate sample was also taken. The results showed that the concentrations were still within the same order of magnitude. A duplicate TDS sample at SJSC source, which was analyzed within the hold time, showed that the results for the qualified samples were not significantly different. Overall, the "C" flag does not reduce confidence in data significantly.

3.4.4.2. "Q5"

The "Q5" flag indicates that the sample was received with inadequate chemical preservation, but was preserved by the laboratory. Although the chemical preservation was not sufficient while in transit, the laboratory was able to recover the samples by applying preservation once the samples were received.

This flag is observed only for the terbuthylazine analysis on the SJSC source in the first round and the associated duplicate. Terbuthylazine data in the second round sampling of SJSC source, which was not qualified, is consistent with the qualified data.

3.4.4.3. "O-04" and "O-09"

The "O-04" flag indicates the analysis was performed outside the EPA recommended holding time. The "O-09" flag indicates the sample was received with the EPA recommended holding time expired. In both cases, the analysis was performed outside the EPA holding time. The only difference in the flag is to indicate whether the hold time expired in transit to the laboratory or in the laboratory before the analysis was performed.

These flags were observed on the nitrate and nitrite analyses, which have a 48-hour hold time. After the hold time, nitrate can transform to nitrite and vice versa. Or they can transform into other nitrogen compounds. This effect can be more significant the longer the hold time is expired. Comparing primary sample and field duplicate data (where the primary sample was flagged O-04 and the field duplicate was not qualified), the nitrate and nitrite data were similar indicating that the O-04 flag did not significantly affect the data.

3.4.4.4. "M2"

The "M2" flag indicates the matrix spike recovery was low. The associated blank spike recovery was acceptable.

This flag is observed on endrin aldehyde, an analyte included in same analysis for terbuthylazine. Since the flag is associated only with the result for endrin aldehyde, which is not on the constituent list for evaluation, it does not present significant concern for this study.

3.4.4.5. "L3"

The "L3" flag indicates associated blank spike recovery was above method acceptance limits. A blank spike identifies the performance of the preparation method on a clean matrix that is void of interferences.

This flag is observed on pentachlorophenol, an analyte included in same analysis for terbuthylazine. Since the flag is associated only with the result for pentachlorophenol, which is not on the constituent list for evaluation, it does not present significant concern for this study.

3.5. Conclusions

3.5.1. Soil Hydraulic Conductivity

Comparing the soil hydraulic conductivity data, recycled water effluent flow and time data when exposed to recycled water, shows an increase in two of the soil cores (SCRWA-B and SCRWA-C) and a decrease in one of the soil cores (SJSC-A). This does not include soil cores with gypsum which also affect hydraulic conductivity or distilled water soil cores which were not exposed to recycled water. Generally the results suggest that soil cores with a greater distribution in fine grained material tend to exhibit a reduced hydraulic conductivity when exposed to recycled water. In SJSC-B, SJSC-C, and SCRWA-A, it could not be determined whether exposure to recycled water had reduced the hydraulic conductivity. Only a potential maximum value for final hydraulic conductivity could be measured for SJSC-B and SCRWA-A, and the potential maximum is greater than the initial hydraulic conductivity for these soil cores. The initial hydraulic conductivity could not be measured in SJSC-C, due to the insufficient percentage of fine-grained material.

The clay mineralogy indicated that expansive clays (particularly smectite) were present in a majority of the soil samples which also yielded low hydraulic conductivities. Smectite was the most prevalent component of the clays in SCRWA-D, and the second most prevalent in SJSC-D. The addition of gypsum has a significant effect in increasing the hydraulic conductivity of recycled water through fine grained soils, particularly those with clay mineralogy conducive of clay swelling. This is evident as the fine grained soils cores without gypsum (SJSC-A and SCRWA-A) produced very little effluent water. The respective fine grained soils core with gypsum (SJSC-D and SCRWA-D) produced enough effluent water to complete the sampling objectives. A comparison of the initial hydraulic conductivity by ASTM D-5084 and the final hydraulic conductivity for soil cores SJSC-D and SCRWA-D showed increases in hydraulic conductivity of two and five orders of magnitude respectively. This difference is attributed to the application of gypsum.

For the distilled core samples, it was expected that the initial and final hydraulic conductivity (exposed to distilled water with $CaCl_2$) would be similar. However, the data from the two methods yielded different results. The results indicate that DI-A and DI-B had higher initial hydraulic conductivity compared to the final hydraulic conductivity with exposure to distilled water. DI-C had a lower initial hydraulic conductivity compared to the final hydraulic conductivity with exposure to distilled water. The dissimilarity is attributed to the different methodologies in determining hydraulic conductivity. The final hydraulic conductivity was not determined using the ASTM method, but rather the effluent volume measurements from the bench test. The final conductivity, however, does provide a realistic indication of the observed rate of water percolation.

Bacterial growth was present in almost all the effluent samples as shown in the HPC results. Bacterial growth likely contributed to a lower final hydraulic conductivity with exposure to the recycled and distilled water sources, although this could not be verified.

3.5.2. Constituent Attenuation

The monitored constituents for the bench test can be grouped into categories based on their observed potential to migrate through the soil cores with minimal changes in concentration.

A number of constituents consistently exhibited significant (20% or more) attenuation across the majority of the soil columns. These constituents include potassium, phosphate, nitrate, THMs, and some haloacetic acids (BCAA, DBAA, and DCAA).

Some constituents exhibited consistent significant increases after percolation through soil. Constituents that have shown this behavior include nitrite and PFCs. Nitrite concentrations may be a result of leaching from the soil core, or transformation from the nitrate concentrations. PFC concentrations may be the result of PFC formation from precursors in the source water and the soil. PFCs may also have originated from the soil core; soil testing was not done to see if PFCs were already present in the soil.

Constituents that have exhibited initial large increases in the first round of sampling followed by no significant changes in the second round of sampling include DOC, TOC, calcium, and magnesium. The behavior of these constituents is suspected to be a result of an initial leaching from the soil cores, followed by equilibration with the infiltrating water.

Alkalinity, pH, TDS, DO, boron, chloride, sulfate and sodium exhibited no significant changes after percolation through soil. NDMA also does not appear to be affected by the transport through soil, although concentrations were variable in the influent and effluent. One of the haloacetic acids (TCAA) and EDTA did not show strong removal through the soil cores.

Constituents that have been inconclusive due to significant variation in the influent concentration or high potential for bacterial growth include surfactants, HPC, and coliforms. Minor decreases in surfactant concentrations were observed in the SJSC soil cores, and minor increases in the SCRWA soil cores.

Bromide, cyanide, terbuthylazine, NTA, E. Coli, and perchlorate were not detected in the influent or effluent samples. The reporting limit for bromide was 0.5 mg/L, for cyanide is 5 µg/L, for terbuthylazine is 0.1 µg/L, for NTA is 100 µg/L, and for perchlorate is 4 µg/L. VOCs other than THMs were generally not detected. VOCs that were detected were 2-butanone, toluene, methylene chloride, and chloromethane. Toluene, methylene chloride, and chloromethane were found infrequently in the core effluent samples and at levels near the reporting limit. 2-butanone was found in multiple core effluent samples and is regarded as an artifact from the bench test apparatus.

4. CONCLUSIONS

4.1. Summary of Constituent Risk to Groundwater

Based on the results obtained from the model and the bench test, the constituents of concern for recycled water are categorized into levels of risk: high, medium, and low, representing the relative risk to groundwater. The threat evaluated is relative to the risk of detection or increase in concentration of a constituent in the groundwater. High risk includes constituents that have 1) shown an increase rather than a removal from soil percolation or 2) have not shown short-term significant removal and are not typically present in groundwater (not naturally occurring). Medium risk is the category for constituents that 1) have been found to not be attenuated from percolation in the bench test or model (indicating potential long-term risk), and 2) have been shown in Volume I of this report to have higher concentrations in recycled water than in groundwater. The last category, low risk, is for constituents that 1) have exhibited significant attenuation in the bench test or model, or 2) have not exhibited significant attenuation but have been found in Volume I to be similar in concentration in recycled water and groundwater, or 3) have not been detected in any of the samples in the bench test. ORP, DO, alkalinity, and pH are general parameters which can influence the transport of other constituents. These constituents do not pose a threat to groundwater, and are not categorized in terms of risk. Given the close relationship between nitrate and nitrite, these constituents are linked for the purpose of this categorization.

Constituents	High Risk		Medium Risk	Low Risk		
	1) have shown an increase rather than removal from soil percolation in the bench test	2) have not shown short-term significant removal and are not typically present in groundwater	1) have not attenuated from percolation in the bench test or model, and 2) are typically higher concentrations in recycled water than in groundwater	1) have exhibited significant attenuation in the bench test or model	2) have not exhibited significant attenuation but are similar in concentration in reclaimed water and groundwater	3) have not been detected in any of the samples in the bench test
Nitrite/Nitrate	X					
PFCs	X					
EDTA		X				
HAA6		X				
NDMA		X				
Surfactants		X				
TDS			X			
Boron			X			
Chloride			X			
Sulfate			X			
Sodium			X			
TOC			X			
DOC			X			
THMs			X			
Phosphate				X		
Calcium					X	
Magnesium					X	
Potassium				X		
Bromide						X
Cyanide						X
Terbuthylazine						X
NTA						X
E. Coli						X
Perchlorate						X
other VOCs						X

4.2. Comparison Between Model and Bench Test

In the model, the attenuation of the four constituents evaluated was observed to be consistently present whereas the bench test monitored many more constituents and these results were more variable. In the bench test, some constituents did not show any attenuation or actually increased as they migrated through the soil cores. The bench test also had some significant variability in influent concentrations in recycled water.

The bench test was also less consistent in constituent removal over time. The second round sampling was expected to show removal as a longer term condition (the first round sampling being the initial condition). In the model, level of attenuation improved over time. In the bench test, a higher attenuation over time was not seen due to the high variation in results. However, because of the shorter soil length and shorter time frame evaluated, bench test results were expected to show less change when compared to the model short term results.

The model, which evaluated soil depths to 50 feet, showed significant attenuation of the selected constituents: (m-xylene, chloroform, NDMA, and bromodichloromethane). The bench test evaluated soil cores which varied from 1 foot in length (for fine-grained soil cores) to almost 4 feet in length (for coarse-grained core). If the bench test were over a larger soil depth, we expect the attenuation would be more apparent in the results. Generally, the overall attenuation is expected to be greater with more soil depth, however the majority of the attenuation is expected to occur in the first few feet and the incremental attenuation achieved is reduced with increased soil depth. Degradation and/or transformation of constituents, which were fate and transport processes not included in the model, may have influenced the results of the bench test.

The estimated percent removal of each constituent in the model can be compared to the results from the bench test at the same approximate time and depth. From Figure II-2-2A, chloroform is expected to be reduced to approximately 10% of the original concentration at a depth of 13 feet after 2 months. The bench test showed reductions of around 50%, as observed in Tables II-3-5 and II-3-8, indicating that the model may over-estimate attenuation of chloroform through sand. This comparison cannot be reliably made for the other model scenarios because the two-month curves are too severely sloped to obtain a reliable numeric value.

4.3. Recommendations for Pilot Study

The next phase of this study (to be discussed in Volume III of this report) includes a full-scale pilot study of recycled water application at a site in San Jose. Some of the findings from the modeling and bench test can be used to refine the design of that pilot study, so that it provides more useful data for evaluating the potential impact to groundwater.

Constituents of low risk, particularly constituents that were not detected in the bench test, may not need to be included in the full monitoring scheme. These constituents may be scaled back in the monitoring plan scope in the pilot study (e.g. monitoring only in the source recycled water until they are consistently detected).

Vadose zone wells should be installed at depths that are closer to the surface. The model has shown that attenuation behaves more in an exponential curve becoming asymptotic with respect to depth. Attenuation occurs most dramatically at the first ten feet of depth. The model also showed that significant changes in constituent transport can occur over time, and an extended monitoring program is recommended to evaluate potential long-term effects to groundwater.

REFERENCES

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APPENDICES

APPENDIX II-A

DRILLING MAPS AND BORING LOGS

BORING LOG

PROJECT NO. 27011-07-3200
BORING NO. Llagas-1
LOGGED BY: Norman Wong

PROJECT NAME Recycled Water Study
BORING LOCATION Llagas-1
SURFACE ELEV.:
DRILLER RSI Drilling
START: 5/13/2008, 9:35
FINISH: 5/13/2008, 11:00

DEPTH	SAMPLE				RECOVERY IN INCHES	U.S.C.S SOIL TYPE	CONTACT DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO.
	NO.	TYPE	INTERVAL						
			FROM	TO					
	Lllagas-1 0 to 4	soil	0.0	4.0	44	GM		Maroon brown, dry	
						CL or ML		regular brown, dry, no gravel	
5	Lllagas-1 4 to 8	soil	4.0	8.0	44				
10	Lllagas-1 8 to 12	soil	8.0	12.0	38	GC		Moist, reddish borwn, large gravel pieces	
15								Note: Two drill tips were broken, refusal at 12 feet.	
20									
25									
30									
35									
40									

BORING LOG

PROJECT NO. 27011-07-3200
BORING NO. Llagas-2
LOGGED BY: Norman Wong

PROJECT NAME Recycled Water Study
BORING LOCATION Llagas-2
SURFACE ELEV.:
DRILLER RSI Drilling
START: 5/13/2008, 12:00
FINISH: 5/13/2008, 1:30

DEPTH	SAMPLE NO.	SAMPLE TYPE	INTERVAL FROM	INTERVAL TO	RECOVERY IN INCHES	U.S.C.S SOIL TYPE	CONTACT DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO.
	Llagas-2 0 to 4	soil	0.0	4.0	30	GC		Reg brown, saome sand, poorly graded, dry	
5	Llagas-2 4 to 8	soil	4.0	8.0	16				
10	Llagas-2 8 to 12	soil	8.0	12.0	16	CL		Moist, clayey, regular brown	
15	Llagas-2 12 to 1	soil	12.0	16.0	42	GC CL		Regular brown, lots of clay moist, clayey	
20	Llagas-2 16 to 2	soil	16.0	20.0	44	GC CH		some large gravel, lots of clay very clayey, wth gravel, brown-orange very plastic	
	Llagas-2 20 to 2	soil	20.0	24.0	48				
25	Llagas-2 24 to 2	soil	24.0	28.0	78	CL		silty clay	
30	Llagas-2 28 to 30	soil	28.0	30.0	24	SC		sandy, moist, brown	
								note: logged w/o opening cores	
35									
40									

Locus TECHNOLOGIES

BORING LOG

PROJECT NO. 27011-07-3200
BORING NO. Llagas-3
LOGGED BY: Norman Wong

PROJECT NAME Recycled Water Study
BORING LOCATION Llagas-3 SURFACE ELEV.:
DRILLER RSI Drilling START: 5/14/2008, 8:00 FINISH: 5/14/2008, 11:30

DEPTH	SAMPLE				RECOVERY IN INCHES	U.S.C.S SOIL TYPE	CONTACT DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO.
	NO.	TYPE	INTERVAL						
			FROM	TO					
	Llagas-3 0 to 4	soil	0.0	4.0	42	GC		Regular brown, lots of gravel, roots present	
						ML		moist, darker brown, crumbles	
5	Llagas-3 4 to 8	soil	4.0	8.0	38	CL or ML		Roots present, moist, crumbles, dark brown,	
10	Llagas-3 8 to 12	soil	8.0	12.0	42	GC		Lighter brown, hard, less clay	
15	Llagas-3 12 to 1	soil	12.0	16.0	42	CL or GC		Reddish brown, lots of gravel, lots of mottling, heterogenous	
20	Llagas-3 16 to 2	soil	16.0	20.0	48	GC		Lots of gravel	
	Llagas-3 20 to 2	soil	20.0	24.0	48			Reddish, silty clay, crumbles, pockets of light colored sand	
25	Llagas-3 24 to 2	soil	24.0	28.0	24	CL		silty clay, less silt, mottling, pockets of sand, some gravel	
30	Llagas-3 28 to 30	soil	28.0	30.0	24				
35									
40									

BORING LOG

PROJECT NO. 27011-07-3200
BORING NO. Llagas-4
LOGGED BY: Norman Wong

PROJECT NAME Recycled Water Study
BORING LOCATION Llagas-4
SURFACE ELEV.:
DRILLER RSI Drilling
START: 5/14/2008, 12:30
FINISH: 5/14/2008, 3:20

DEPTH	SAMPLE NO.	SAMPLE TYPE	INTERVAL FROM	INTERVAL TO	RECOVERY IN INCHES	U.S.C.S SOIL TYPE	CONTACT DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO.
	Llagas-4 0 to 4	soil	0.0	4.0	24	ML		Brown, moist, crumbles easily, soft, no gravel, homogenous	
5	Llagas-4 4 to 8	soil	4.0	8.0	36			brown, some roots, homegenous	
10	Llagas-4 8 to 12	soil	8.0	12.0	40			Loose, fluffy, crunbles, light brown, dry	
15	Llagas-4 12 to 1	soil	12.0	16.0	36			Roots present, some mottling grey	
20	Llagas-4 16 to 2	soil	16.0	20.0	38	GC SC		w/ gravel brown, mottling, some red	
	Llagas-4 20 to 2	soil	20.0	24.0	40	CL		dark grey, silty clay, very plastic	
25	Llagas-4 24 to 2	soil	24.0	28.0	38	CH		more moist, dark grey	
30	Llagas-4 28 to 30	soil	28.0	30.0	24	CL		Wet, very plastic, mottling	
35									
40									

BORING LOG

PROJECT NO. 27011-07-3200
BORING NO. SCV-1
LOGGED BY: Norman Wong

PROJECT NAME Recycled Water Study
BORING LOCATION SCV-1
SURFACE ELEV.:
DRILLER RSI Drilling
START: 5/12/2008, 7:00
FINISH: 5/12/2008, 10:00

DEPTH	SAMPLE				RECOVERY IN INCHES	U.S.C.S SOIL TYPE	CONTACT DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO.
	NO.	TYPE	INTERVAL						
			FROM	TO					
	SCV-1 0 to 4	soil	0.0	4.0	30	CL		silty clay, brown	
5	SCV-1 4 to 8	soil	4.0	8.0	36			some gravel	
10	SCV-1 8 to 12	soil	8.0	12.0	48			darker brown, dry	
15	SCV-1 12 to 16	soil	12.0	16.0	42			less silty toward 16 feet	
20	SCV-1 16 to 20	soil	16.0	20.0	48			moist, less silt, no gravel	
	SCV-1 20 to 24	soil	20.0	24.0	48	CH		dark brown	
25	SCV-1 24 to 28	soil	24.0	28.0	48			lighter brown, some mottling	
30	SCV-1 28 to 30	soil	28.0	30.0	24			same as above	
35									
40									

Locus TECHNOLOGIES

BORING LOG

PROJECT NO. 27011-07-3200
BORING NO. SCV-2
LOGGED BY: Norman Wong

PROJECT NAME Recycled Water Study
BORING LOCATION SCV-2
SURFACE ELEV.:
DRILLER RSI Drilling
START: 5/13/2008, 7:00
FINISH: 5/13/2008, 9:00

DEPTH	SAMPLE NO.	SAMPLE TYPE	INTERVAL FROM	INTERVAL TO	RECOVERY IN INCHES	U.S.C.S SOIL TYPE	CONTACT DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO.
	SCV-2 0 to 4	soil	0.0	4.0	24	ML		Dark brown, some clays and gravel	
5	SCV-2 4 to 8	soil	4.0	8.0	44	GM		Very large rocks, dry, some sand, some fines,	
10	SCV-2 8 to 12	soil	8.0	12.0	38			light brown band, sandy, less clay	
15	SCV-2 12 to 16	soil	12.0	16.0	30	GC		moist, very large rocks, poorly graded, some sand	
	SCV-2 16 to 18	soil	16.0	20.0	24				
20								notes: broke one shoe, refusal at 18 feet	
25									
30									
35									
40									

BORING LOG

PROJECT NO. 27011-07-3200
BORING NO. SCV-3
LOGGED BY: Norman Wong

PROJECT NAME Recycled Water Study
BORING LOCATION SCV-3 (IDT)
SURFACE ELEV.:
DRILLER RSI Drilling
START: 5/12/2008, 10:30
FINISH: 5/12/2008, 12:00

DEPTH	SAMPLE NO.	SAMPLE TYPE	INTERVAL FROM	INTERVAL TO	RECOVERY IN INCHES	U.S.C.S SOIL TYPE	CONTACT DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO.
	SCV-3 0 to 4	soil	0.0	4.0	36	CL		silty clay, brown, dry, roots present,	
5	SCV-3 4 to 8	soil	4.0	8.0	36			moist, less silt, some roots	
10	SCV-3 8 to 12	soil	8.0	12.0	42			less silt, few gravel	
15	SCV-3 12 to 16	soil	12.0	16.0	44			same as above	
20	SCV-3 16 to 20	soil	16.0	20.0	46			same as above	
	SCV-3 20 to 24	soil	20.0	24.0	47			light brown, less moist, some mottling	
25	SCV-3 24 to 28	soil	24.0	28.0	48			very moist, some gravel, some mottling	
30	SCV-3 28 to 30	soil	28.0	30.0	24				
35									

BORING
LOG

PROJECT NO. 27011-07-3200

BORING NO. SCV-3

LOGGED BY: Norman Wong

PROJECT NAME Recycled Water Study

BORING LOCATION SCV-3 (IDT) SURFACE ELEV.:

DRILLER RSI Drilling START: 5/12/2008, 10:30 FINISH: 5/12/2008, 12:00

DEPTH	SAMPLE				RECOVERY IN INCHES	U.S.C.S SOIL TYPE	CONTACT DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO.
	NO.	TYPE	INTERVAL						
			FROM	TO					
40									

BORING LOG

PROJECT NO. 27011-07-3200
BORING NO. SCV-4
LOGGED BY: Norman Wong

PROJECT NAME Recycled Water Study
BORING LOCATION SCV-4
SURFACE ELEV.:
DRILLER RSI Drilling
START: 5/12/2008, 12:30
FINISH: 5/12/2008

DEPTH	SAMPLE NO.	SAMPLE TYPE	INTERVAL FROM	INTERVAL TO	RECOVERY IN INCHES	U.S.C.S SOIL TYPE	CONTACT DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO.
	SCV-4 0 to 4	soil	0.0	4.0	30	GC CL		Dry Dark brown, silty clay, dry some gravel	
5	SCV-4 4 to 8	soil	4.0	8.0	48	CL			
10	SCV-4 8 to 12	soil	8.0	12.0	36	GC CL		regular brown, crumbles some gravel	
15	SCV-4 12 to 16	soil	12.0	16.0	44	GC		brown, hetergenous grains, crumbles easily	
20	SCV-4 16 to 20	soil	16.0	20.0	44	GC CL		silty clay, less silt, reg. brown, little moist, gravel, mottling	
	SCV-4 20 to 24	soil	20.0	24.0	44	CL			
25	SCV-4 24 to 28	soil	24.0	28.0	44	GC		sandy, crumbles, lots of gravels	
30	SCV-4 28 to 30	soil	28.0	30.0	18	GC			
35									
40									

APPENDIX II-B

SIEVE ANALYSIS, HYDROMETER TEST AND HYDRAULIC CONDUCTIVITY TEST REPORT

VECTOR
ENGINEERING, INC.

DATE: August 6, 2008

TO: J. Wesley Hawthorne
Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043

SS e-mail: wongn@locustec.com

JOB NO: 081707.00
LAB LOG: 2514.1

RECEIVED
AUG 1 8 2008
BY:

RE: **Lab Report: Soil Column tests-Job #27011 PO 30-12337**

Enclosed are results for: Samples Received - April 25, 2008

Code	Item	Quantity
	Report includes results for:	
	Effluent Monitoring and Collection	6
19526	Sieve Analysis, ASTM D-422 w/ Hydrometer	11
18572	Hydraulic Conductivity-Flex-wall, ASTM D-5084	10
23524	Additional Monitoring	6
	Tests performed by Cranmer Analytical Lab (24 reports)	90
	Photographs of original 11 samples removed from tubes	

Note: Sample SJ/SC-C was composed of 58.8% rock (+3/8"); there was not enough fine material to perform the hydraulic conductivity or hydrometer tests. Five remaining samples have provided inadequate effluent flow for testing.

Thank you for consulting Vector Engineering for your material testing requirements. We look forward to working with you again. If you have any questions or require any additional information, please call us at 1-530-272-2448.

Sincerely,

Prepared By: Kenneth R. Criley
Technical Director

M Dell-Era
Reviewed By: Margaret Dell-Era
Laboratory Administrator

This testing is based up on accepted industry practice as well as the test method listed. These results apply only to the samples supplied and tested for the above referenced job. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

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Vector Engineering, Inc.

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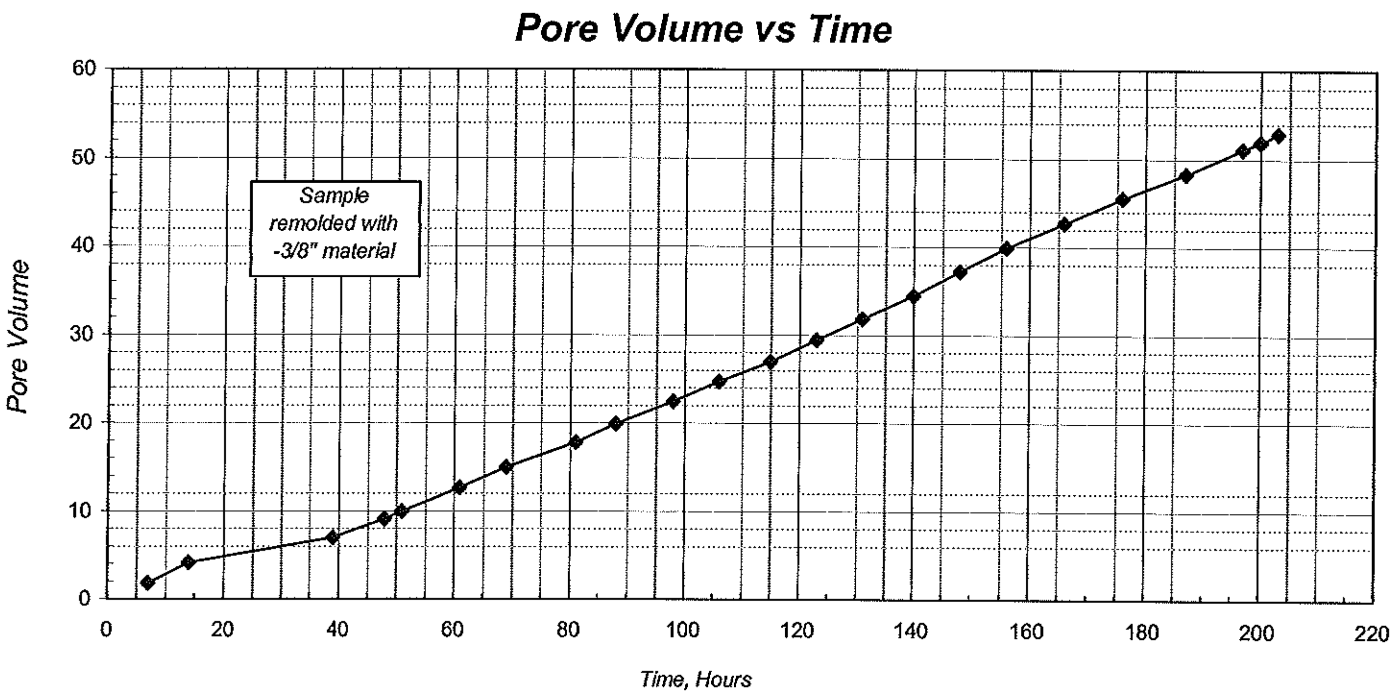
LABORATORY SERVICES

Soil Column Bench Test

REPORT

Client / Project Name: **Locus Technologies/Soil Column tests Job#27011 PO 30-12337**	Project No: **081707.00**	Lab Sample Number: **2514-C**
Sample ID: **SJ/SC-C 4-8' rec'd 5/17/08**		Report Date: **July 31, 2008**



Pore Volume vs Time

SPECIMEN DATA

SAMPLE ID:	**SJ/SC-C 4-8' rec'd 5/17/08**	
DESCRIPTION:	Brown Poorly Graded Gravel w/ Silt & Sand (GP-GM)	
	INITIAL	FINAL
HEIGHT, in.	12.9	12.5
DIAMETER, in.	2.0	2.0
WATER CONTENT, %	8.3	19.4
DRY DENSITY, pcf	86	88
SATURATION, %	23	58
(Specific Gravity assumed as 2.7)		

COMMENTS:

Site water used as permeant (reference sample ID).

Pore Volume = 340.8 cc; Breakthrough within one minute

Sample sieved over 3/8"; 58.8% rock (dry weight) removed prior to remolding

After test: Sample appeared uniformly mixed and very wet with some free water.

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

Print Date: 08/06/08

Reviewed By: SS

LSN: 2514-C

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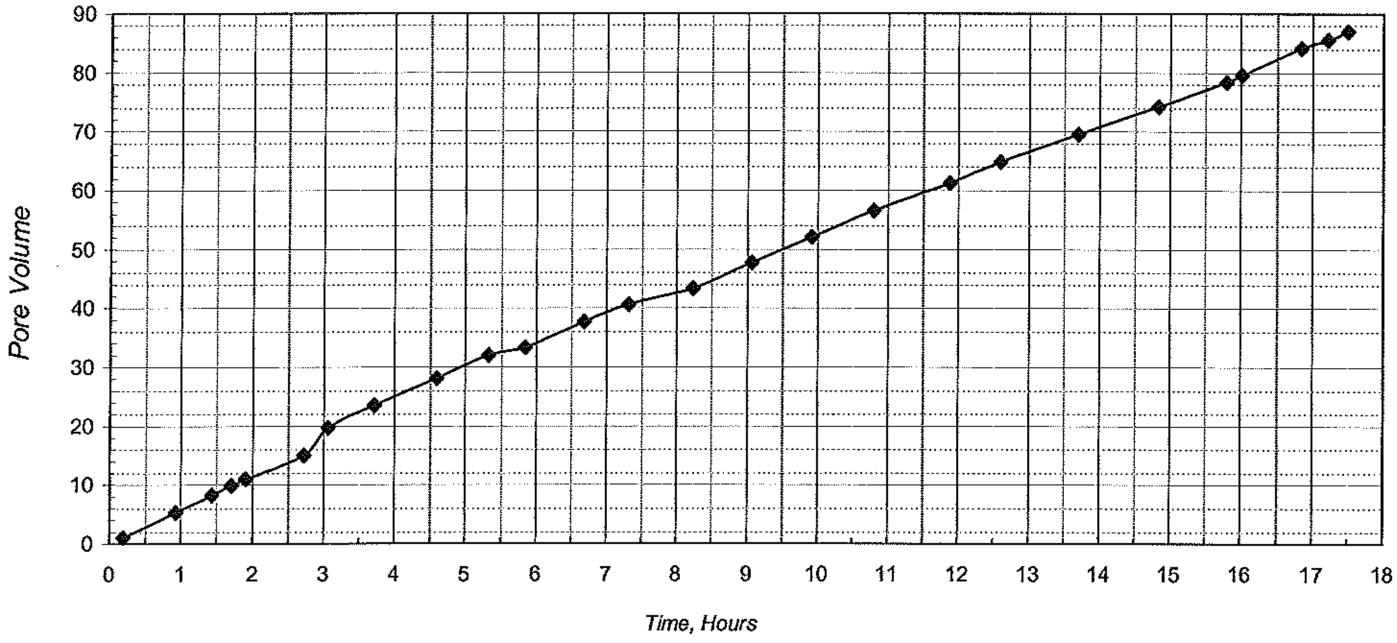
LABORATORY SERVICES

Soil Column Bench Test
REPORT

Client / Project Name:	Project No:	Lab Sample Number:
Locus Technologies/Soil Column tests Job#27011 PO 30-12337	**081707.00**	**2514-D**

Sample ID:	Report Date:
SJ/SC-D 20-24' rec'd 5/17/08	**July 31, 2008**

Pore Volume vs Time



SPECIMEN DATA

SAMPLE ID:	**SJ/SC-D 20-24' rec'd 5/17/08**	
DESCRIPTION:	Brown Silty Clay (CL-ML) (Gypsum added)	
	INITIAL	FINAL
HEIGHT, in.	8.7	8.6
DIAMETER, in.	2.0	2.0
WATER CONTENT, %	22.0	25.7
DRY DENSITY, pcf	95	95
SATURATION, %	76	90
(Specific Gravity assumed as 2.7)		

COMMENTS:

Site water used as permeant (reference sample ID).

Pore Volume = 203.6 cc; Breakthrough within 4 minutes

Sample sieved over 3/8"; 0% rock removed prior to remolding

After test: Ends very wet, center moist, clayey sample

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

Print Date: 08/01/08
Reviewed By: KA
LSN: **2514-D**

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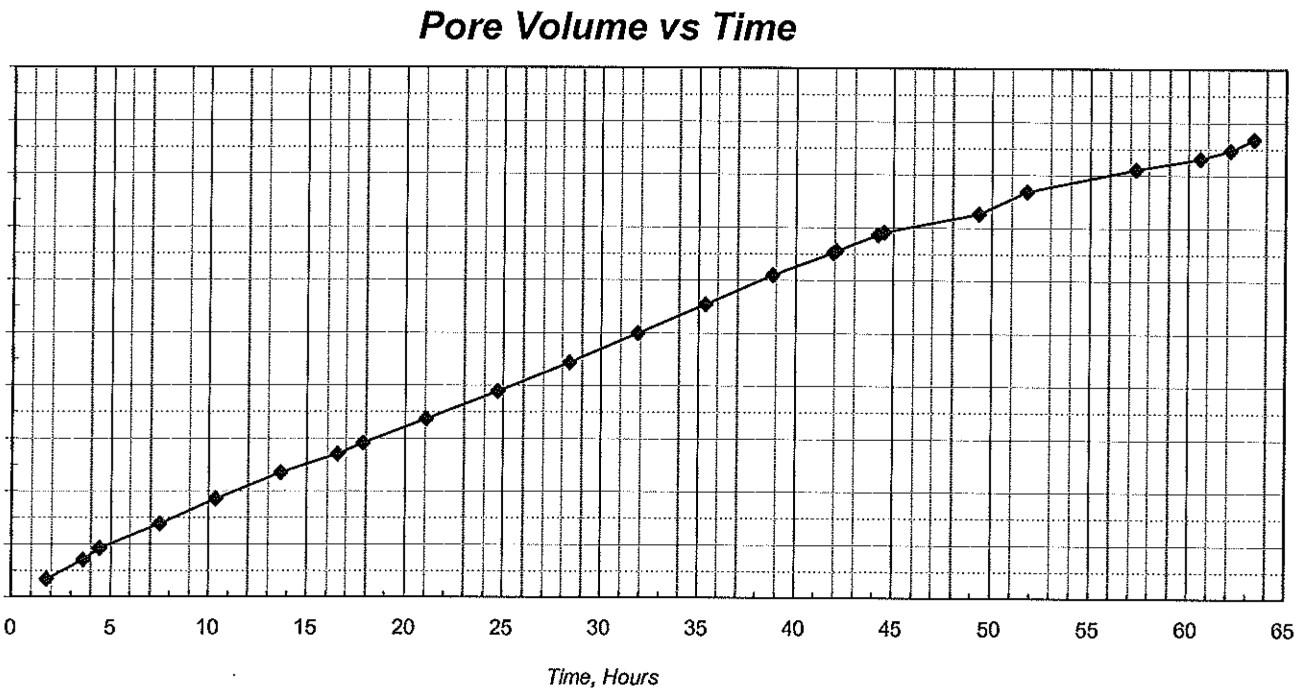
LABORATORY SERVICES

Soil Column Bench Test
REPORT

Client / Project Name: **Locus Technologies/Soil Column tests Job#27011 PO 30-12337**	Project No: **081707.00**	Lab Sample Number: **2514-F**
Sample ID: **SCRWA-B 4-8' rec'd 5/17/08**		Report Date: **July 31, 2008**



SPECIMEN DATA

SAMPLE ID: **SCRWA-B 4-8' rec'd 5/17/08**
DESCRIPTION: Brown Silt w/ Sand (ML)

	INITIAL	FINAL
HEIGHT, in.	31.9	29.5
DIAMETER, in.	2.0	2.0
WATER CONTENT, %	13.4	32.9
DRY DENSITY, pcf	81	88
SATURATION, %	34	97

(Specific Gravity assumed as 2.7)

COMMENTS:
Site water used as permeant (reference sample ID).
Pore Volume = 885.7 cc; Breakthrough within 28 minutes
Sample sieved over 3/8"; 0% rock removed prior to remolding
After test: Sample had uniform texture, upper 1/3 wetter, top and bottom ends darker, possible bacterial growth.

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

Print Date: 08/01/08
Reviewed By: KP
LSN: 2514-F

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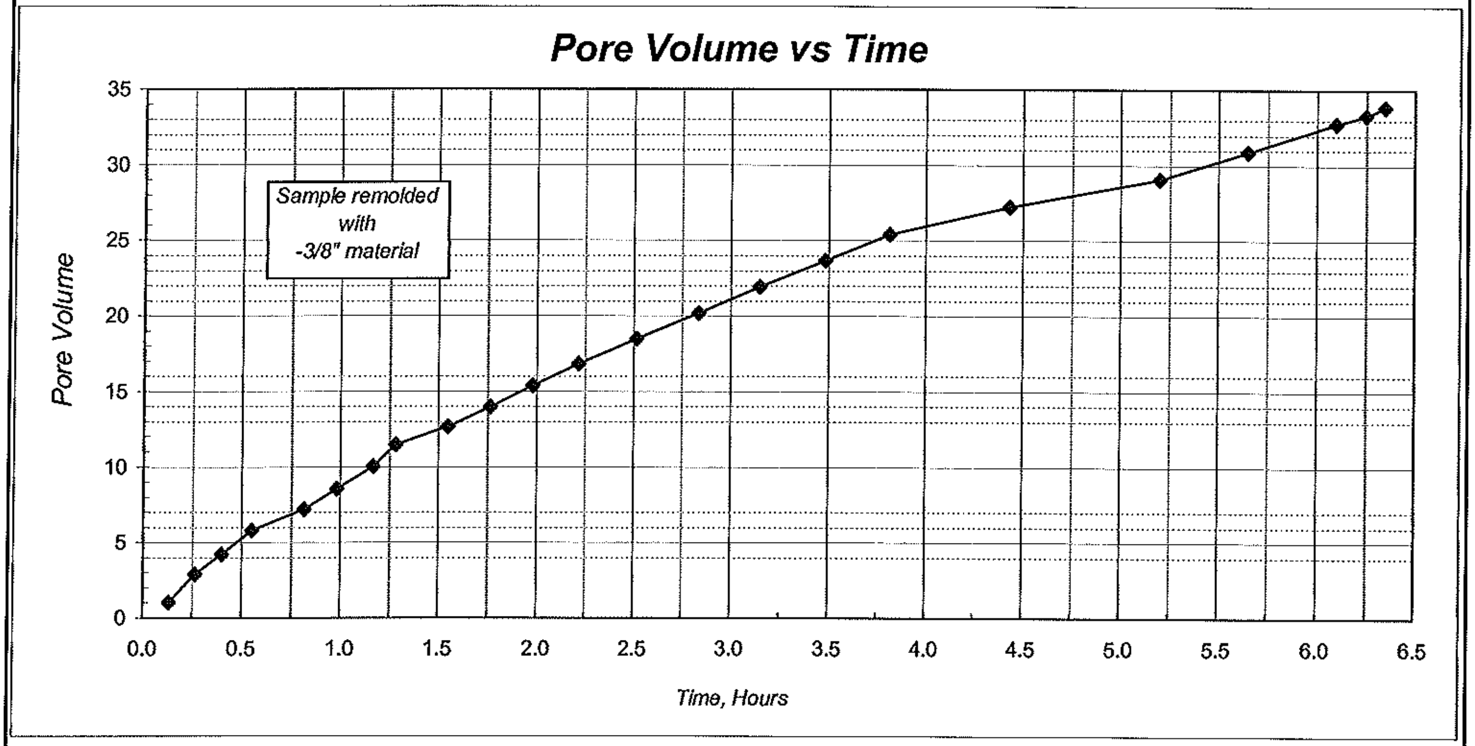
LABORATORY SERVICES

Soil Column Bench Test

REPORT

Client / Project Name: **Locus Technologies/Soil Column tests Job#27011 PO 30-12337**	Project No: **081707.00**	Lab Sample Number: **2514-G**
Sample ID: **SCRWA-C 0-4' rec'd 5/17/08**		Report Date: **July 31, 2008**



SPECIMEN DATA

SAMPLE ID:	**SCRWA-C 0-4' rec'd 5/17/08**	
DESCRIPTION:	Brown Well-Graded Sand w/ Gravel (SW)	
	INITIAL	FINAL
HEIGHT, in.	23.4	22.9
DIAMETER, in.	2.0	2.0
WATER CONTENT, %	5.9	17.6
DRY DENSITY, pcf	97	99
SATURATION, %	22	68

(Specific Gravity assumed as 2.7)

COMMENTS:

Site water used as permeant (reference sample ID).

Pore Volume = 529.2 cc; Breakthrough within two minutes

Sample sieved over 3/8"; 21.0% rock (dry weight) removed prior to remolding

After test: Sample very wet, darker color at lower end.

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

Print Date: 08/06/08

Reviewed By: SS

LSN: 2514-G

Vector Engineering, Inc.

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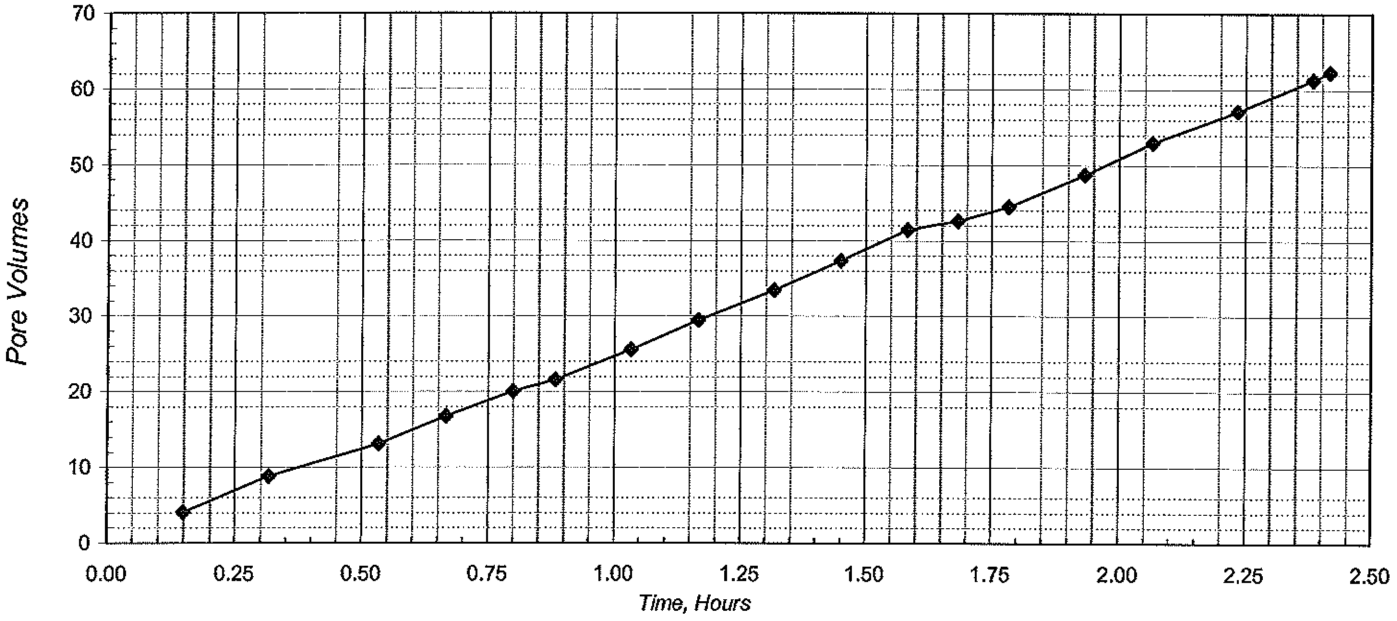
LABORATORY SERVICES

Soil Column Bench Test
REPORT

Client / Project Name: **Locus Technologies/Soil Column tests Job#27011 PO 30-12337**	*Project No:* **081707.00**	*Lab Sample Number:* **2514-H**
Sample ID: **SCRWA-D 0-4' rec'd 5/17/08**		*Report Date:* **July 31, 2008**



Pore Volume vs Time

SPECIMEN DATA

SAMPLE ID:	**SCRWA-D 0-4' rec'd 5/17/08**	
DESCRIPTION:	Dark Gray Lean Clay with Sand (CL) (Gypsum added)	
	INITIAL	FINAL
HEIGHT, in.	8.9	9.0
DIAMETER, in.	2.0	2.0
WATER CONTENT, %	25.2	27.7
DRY DENSITY, pcf	88	88
SATURATION, %	75	81
(Specific Gravity assumed as 2.7)		

COMMENTS:

Site water used as permeant (reference sample ID).

Pore Volume = 228.3 cc; Breakthrough within one minute

Sample sieved over 3/8"; 0% rock removed prior to remolding

After test: Sample uniformly moist, sticky clay.

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

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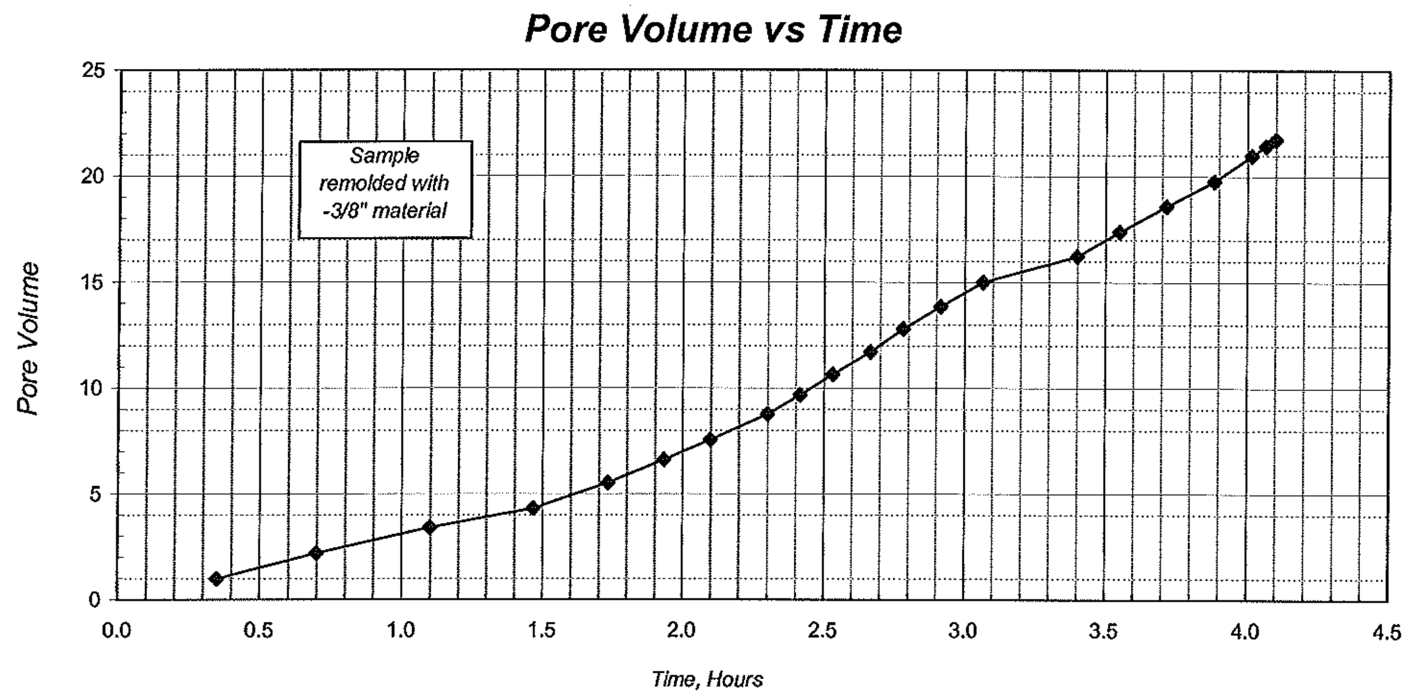
Soil Column Bench Test
REPORT

Client / Project Name: **Locus Technologies/Soil Column tests Job#27011 PO 30-12337**
Project No: **081707.00**
Lab Sample Number: **2514-K**
Sample ID: **DI-C 12-16' rec'd 5/17/08**
Report Date: **July 31, 2008**



SPECIMEN DATA

SAMPLE ID:	**DI-C 12-16' rec'd 5/17/08**	
DESCRIPTION:	Brown Well-Graded Sand w/ Silty Clay and Gravel (SW-SC)	
	INITIAL	FINAL
HEIGHT, in.	31.0	30.3
DIAMETER, in.	2.0	2.0
WATER CONTENT, %	7.7	15.1
DRY DENSITY, pcf	87	89
SATURATION, %	22	46

(Specific Gravity assumed as 2.7)

COMMENTS:

Distilled water used as permeant.

Pore Volume = 802.9 cc; Breakthrough within one minute

Sample sieved over 3/8"; 21.9% rock (dry weight) removed prior to remolding

After test: Sample gravelly, uniform in texture, top 1/2 wetter, no discoloration.

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

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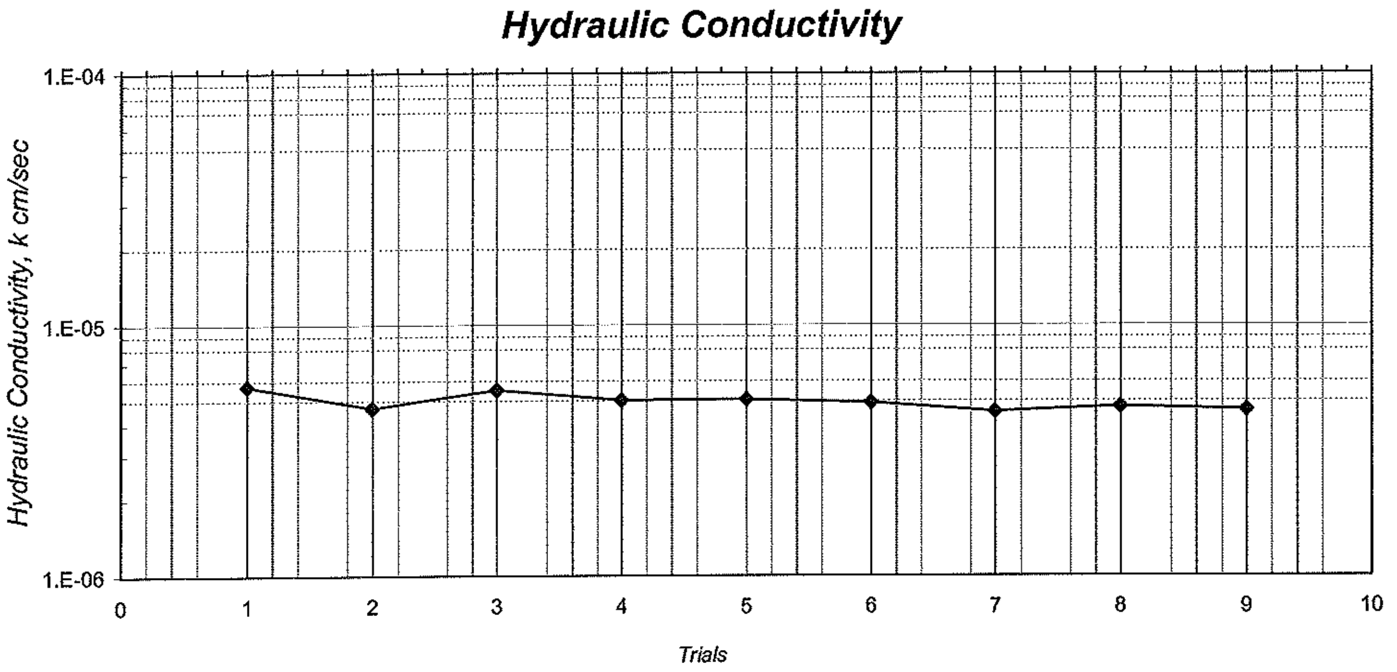
HYDRAULIC CONDUCTIVITY REPORT

Client / Project Name: **Locus Technologies / Soil Column Tests - Job #27011 PO 30-12337**	Project No: **081707.00**	Lab Sample Number: **2514A**
Sample ID: **SJ/SC-A 24' (rec'd 5/17/08)**		Report Date: **June 6, 2008**



SPECIMEN DATA

SAMPLE ID:	**SJ/SC-A 24' (rec'd 5/17/08)**	
DESCRIPTION:	Brown Lean Clay (CL)	
	INITIAL	FINAL
HEIGHT, in.	2.6	2.5
DIAMETER, in.	1.9	1.9
WATER CONTENT, %	24.5	27.3
DRY DENSITY, pcf	95	96
SATURATION, %	85	97
(Specific Gravity assumed as 2.7)		
MAXIMUM DRY DENSITY, pcf		
OPTIMUM WATER CONTENT, %		
SPECIFIED COMPACTION, %		
ACHIEVED COMPACTION, %		

COMMENTS:

Tap water used as permeant.

Sample not remolded

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS: 2 psi
GRADIENT RANGE: 5 - 15
IN / OUT RATIO: 0.99
"B" PARAMETER: 0.98

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
3	48.8	5.5E-06
4	49.1	5.0E-06
5	49.3	5.0E-06
6	49.7	4.9E-06
7	51.6	4.5E-06
8	119.7	4.7E-06
9	119.9	4.6E-06

AVERAGE LAST 4 : **4.7E-06**

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

SAM

Vector Engineering, Inc.

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LABORATORY SERVICES

HYDRAULIC CONDUCTIVITY

REPORT

Client / Project Name: **Locus Technologies / Soil Column Tests - Job #27011 PO 30-12337**

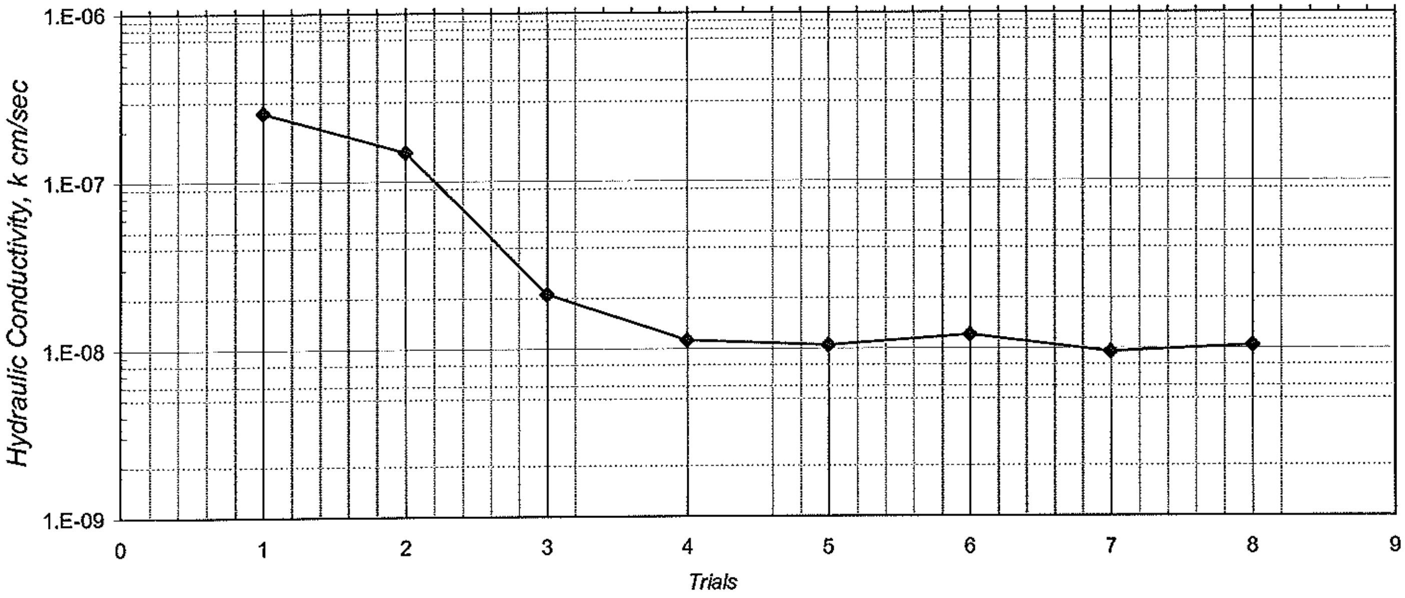
Project No: **081707.00**

Lab Sample Number: **2514B**

Sample ID: **SJ/SC-B 0-4' (rec'd 5/17/08)**

Report Date: **June 9, 2008**

Hydraulic Conductivity



SPECIMEN DATA

SAMPLE ID:	**SJ/SC-B 0-4' (rec'd 5/17/08)**	
DESCRIPTION:	Brown Lean Clay (CL)	
	INITIAL	FINAL
HEIGHT, in.	2.7	2.8
DIAMETER, in.	1.9	1.9
WATER CONTENT, %	20.4	22.9
DRY DENSITY, pcf	105	103
SATURATION, %	91	96
(Specific Gravity assumed as 2.7)		
MAXIMUM DRY DENSITY, pcf		
OPTIMUM WATER CONTENT, %		
SPECIFIED COMPACTION, %		
ACHIEVED COMPACTION, %		

COMMENTS:

Tap water used as permeant.

Sample not remolded

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS: 2 psi

GRADIENT RANGE: 12 - 13

IN / OUT RATIO: 0.99

"B" PARAMETER: 0.98

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
2	51.7	1.5E-07
3	74.0	2.1E-08
4	118.9	1.1E-08
5	142.7	1.0E-08
6	166.9	1.2E-08
7	191.9	9.4E-09
8	215.0	1.0E-08

AVERAGE LAST 4 : **1.1E-08**

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

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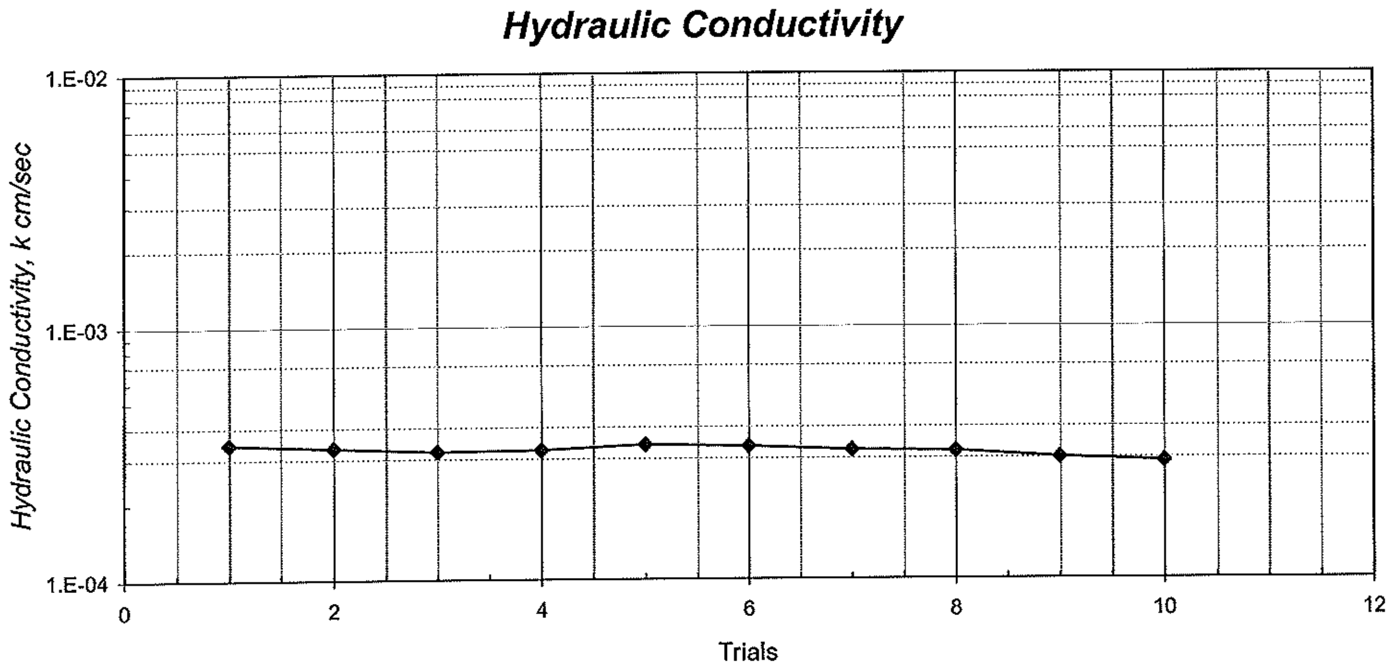
LABORATORY SERVICES

HYDRAULIC CONDUCTIVITY
REPORT

Client / Project Name: **Locus Technologies / Soil Column Tests - Job #27011 PO 30-12337**	Project No: **081707.00**	Lab Sample Number: **2514D**
Sample ID: **SJ/SC-D 20-24' (rec'd 5/17/08)**		Report Date: **June 6, 2008**



SPECIMEN DATA

SAMPLE ID:	**SJ/SC-D 20-24' (rec'd 5/17/08)**	
DESCRIPTION:	Brown Silty Clay (CL - ML)	
	INITIAL	FINAL
HEIGHT, in.	3.0	3.0
DIAMETER, in.	1.9	1.9
WATER CONTENT, %	19.7	22.1
DRY DENSITY, pcf	102	105
SATURATION, %	81	99
(Specific Gravity assumed as 2.7)		
MAXIMUM DRY DENSITY, pcf		
OPTIMUM WATER CONTENT, %		
SPECIFIED COMPACTION, %		
ACHIEVED COMPACTION, %		

COMMENTS:

Tap water used as permeant.

Sample not remolded

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	2 psi
GRADIENT RANGE:	6 - 12
IN / OUT RATIO:	0.94
"B" PARAMETER:	0.99

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
4	48.0	3.2E-04
5	48.0	3.4E-04
6	120.0	3.3E-04
7	120.0	3.2E-04
8	120.0	3.2E-04
9	120.0	3.0E-04
10	120.0	2.9E-04

AVERAGE LAST 4 : **3.1E-04**

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

L : Labexcel \ Projects \2008 \ 081707 \ 2514D-txk
Print Date: 07/30/08 SAK
Reviewed By:
LSN: **2514D**

DCN: TXK-QC-GRAPH (rev. 5/23/07)

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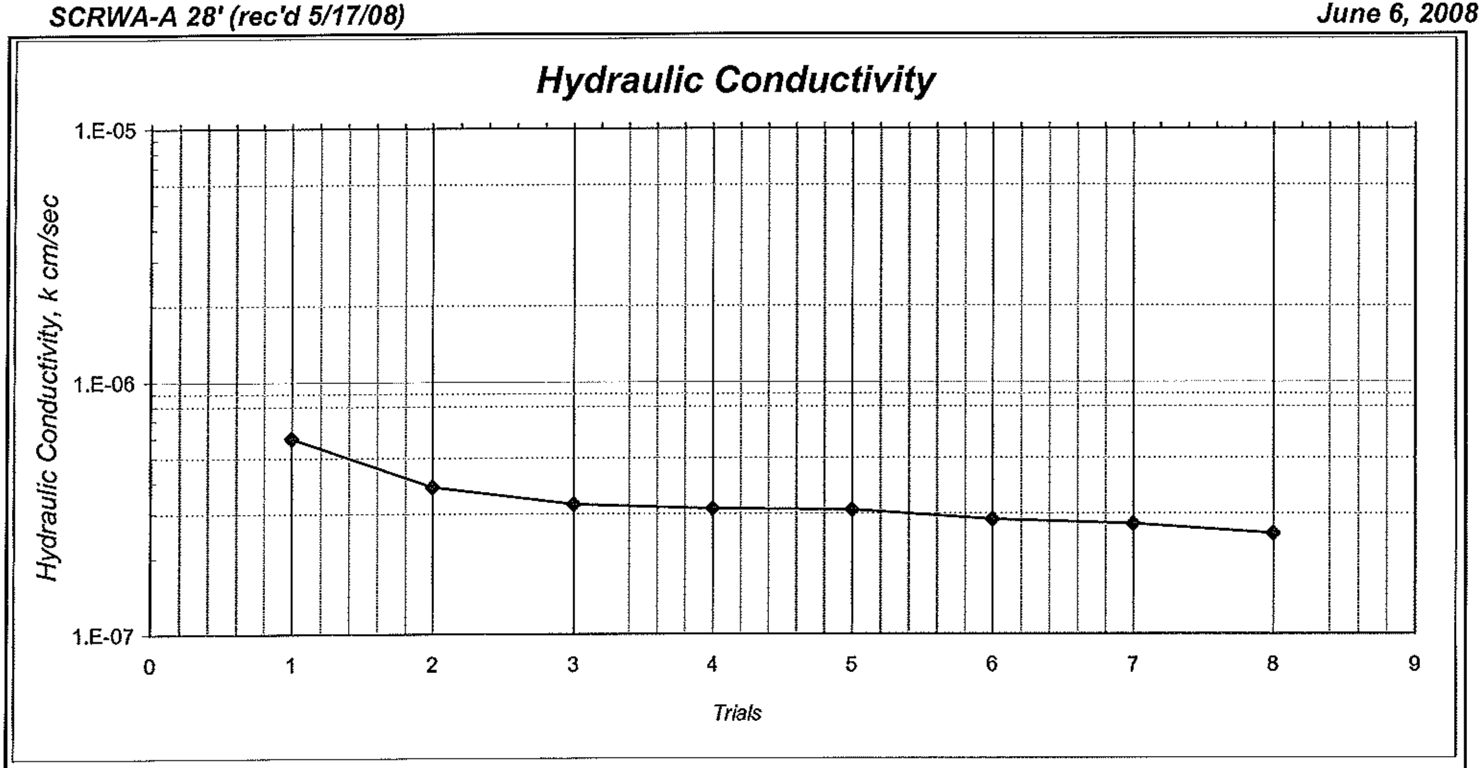
LABORATORY SERVICES

HYDRAULIC CONDUCTIVITY REPORT

Client / Project Name: **Locus Technologies / Soil Column Tests - Job #27011 PO 30-12337**	Project No: **081707.00**	Lab Sample Number: **2514E**
Sample ID: **SCRWA-A 28' (rec'd 5/17/08)**		Report Date: **June 6, 2008**



SPECIMEN DATA

SAMPLE ID:	**SCRWA-A 28' (rec'd 5/17/08)**	
DESCRIPTION:	Dark Gray Lean Clay with Sand (CL)	
	INITIAL	FINAL
HEIGHT, in.	3.1	3.1
DIAMETER, in.	1.9	1.9
WATER CONTENT, %	24.1	24.0
DRY DENSITY, pcf	101	102
SATURATION, %	98	100
(Specific Gravity assumed as 2.7)		
MAXIMUM DRY DENSITY, pcf		
OPTIMUM WATER CONTENT, %		
SPECIFIED COMPACTION, %		
ACHIEVED COMPACTION, %		

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	2 psi
GRADIENT RANGE:	9 - 12
IN / OUT RATIO:	1.04
"B" PARAMETER:	0.99

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
2	97.5	3.8E-07
3	98.7	3.3E-07
4	100.6	3.1E-07
5	101.7	3.1E-07
6	103.2	2.8E-07
7	104.7	2.7E-07
8	119.6	2.5E-07

AVERAGE LAST 4 : **2.8E-07**

COMMENTS:

Tap water used as permeant.

Sample not remolded

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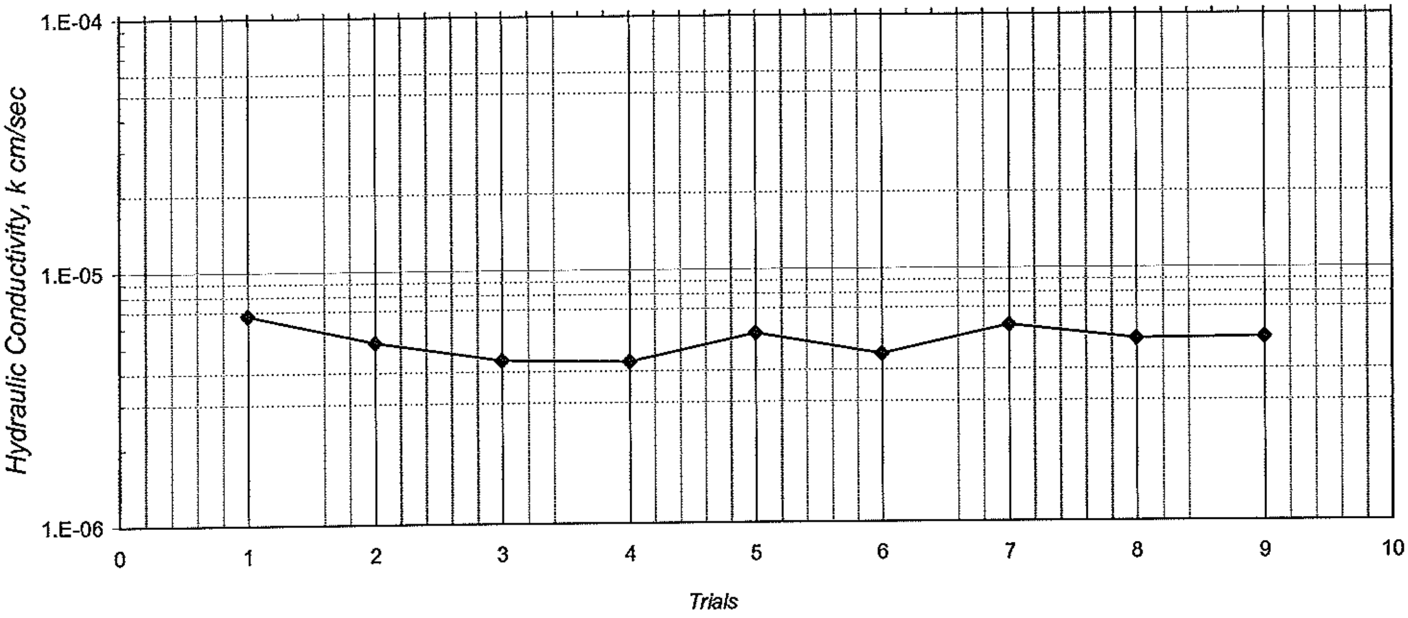
HYDRAULIC CONDUCTIVITY REPORT

Client / Project Name: **Locus Technologies / Soil Column Tests-Job #27011 PO 30-12337**	Project No: **0817707.00**	Lab Sample Number: **2514F**
Sample ID: **SCRWA-B 4-8' (rec'd 5/17/08)**		Report Date: **June 30, 2008**

Hydraulic Conductivity



SPECIMEN DATA

SAMPLE ID:	**SCRWA-B 4-8' (rec'd 5/17/08)**	
DESCRIPTION:	Brown Silt w/ Sand (ML)	
	INITIAL	FINAL
HEIGHT, in.	3.0	2.7
DIAMETER, in.	1.9	2.0
WATER CONTENT, %	15.4	37.4
DRY DENSITY, pcf	81	84
SATURATION, %	38	99
(Specific Gravity assumed as 2.7)		
MAXIMUM DRY DENSITY, pcf	84.7	
OPTIMUM WATER CONTENT, %	13.0	
SPECIFIED COMPACTION, %	100.0	
ACHIEVED COMPACTION, %	95.6	

COMMENTS:

Tap water used as permeant.

Sample was remolded; wet & muddy after permeability test, some material lost.

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	2 psi
GRADIENT RANGE:	6 - 12
IN / OUT RATIO:	0.97
"B" PARAMETER:	0.99

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
3	48.8	4.4E-06
4	112.9	4.3E-06
5	113.1	5.6E-06
6	113.2	4.6E-06
7	113.4	5.9E-06
8	113.8	5.2E-06
9	114.9	5.3E-06
AVERAGE LAST 4 :		**5.3E-06**

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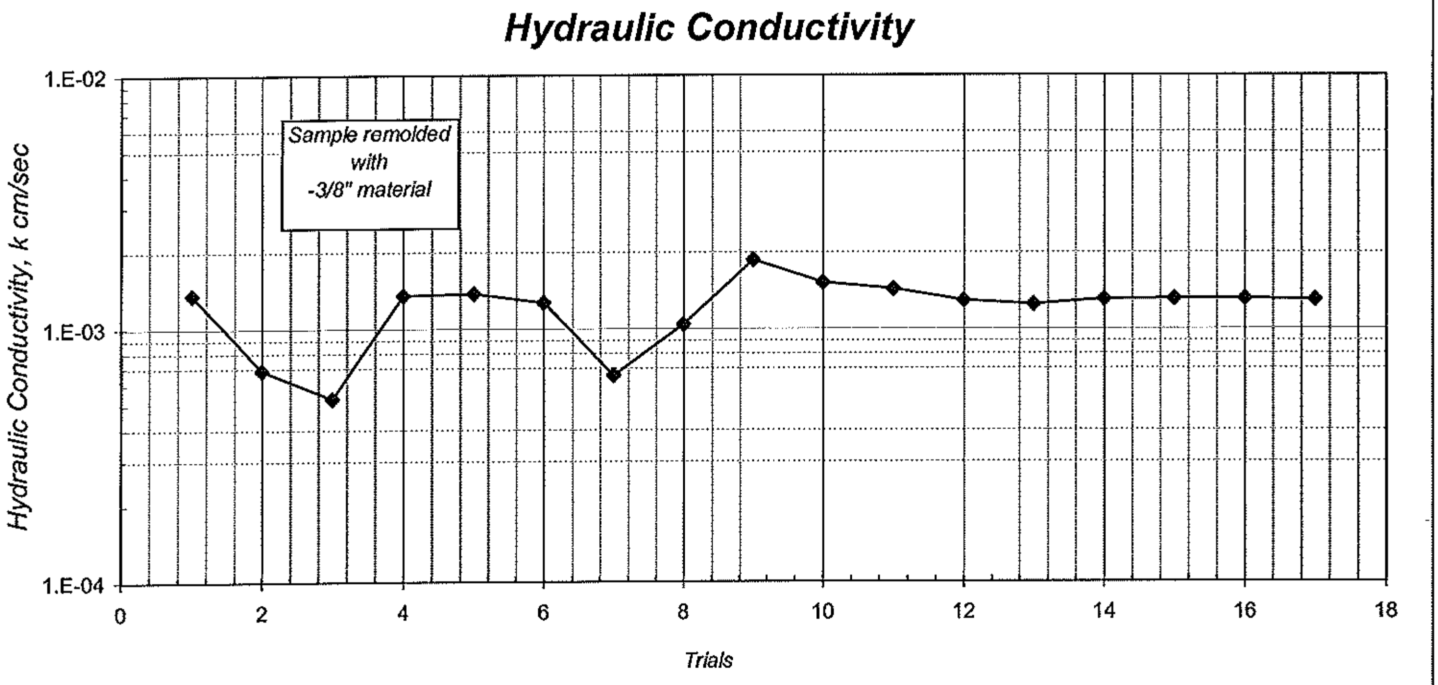
HYDRAULIC CONDUCTIVITY REPORT

Client / Project Name: **Locus Technologies / Soil Column Tests-Job #27011 PO 30-12337**	Project No: **081707.00**	Lab Sample Number: **2514G**
Sample ID: **SCRWA-C 0-4' (rec'd 5/17/08)**		Report Date: **June 23, 2008**

Hydraulic Conductivity



SPECIMEN DATA

SAMPLE ID:	**SCRWA-C 0-4' (rec'd 5/17/08)**	
DESCRIPTION:	Brown Silty Sand w/ Gravel (SM)	
	INITIAL	FINAL
HEIGHT, in.	2.6	2.4
DIAMETER, in.	2.4	2.4
WATER CONTENT, %	5.1	12.1
DRY DENSITY, pcf	115	127
SATURATION, %	30	100
(Specific Gravity assumed as 2.7)		
MAXIMUM DRY DENSITY, pcf	99.3	
OPTIMUM WATER CONTENT, %	5.1	
SPECIFIED COMPACTION, %	100.0	
ACHIEVED COMPACTION, %	115.9	

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	2 psi
GRADIENT RANGE:	0 - 13
IN / OUT RATIO:	0.97
"B" PARAMETER:	0.96

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
11	24.3	1.4E-03
12	24.3	1.3E-03
13	24.3	1.2E-03
14	88.4	1.3E-03
15	88.4	1.3E-03
16	88.4	1.3E-03
17	88.5	1.3E-03
AVERAGE LAST 4 :		**1.3E-03**

COMMENTS:

Tap water used as permeant. Sample remolded with 21% rock removed, readings at 15 second intervals. Compacted at greater density than goal to keep sample from falling apart.

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L : Labexcel \ Projects \2008 \ 081707 \ 2514G-txk	Print Date: 08/06/08	Reviewed By: KC	LSN: 2514G

DCN: TXK-QC-GRAPH (rev. 6/19/08)

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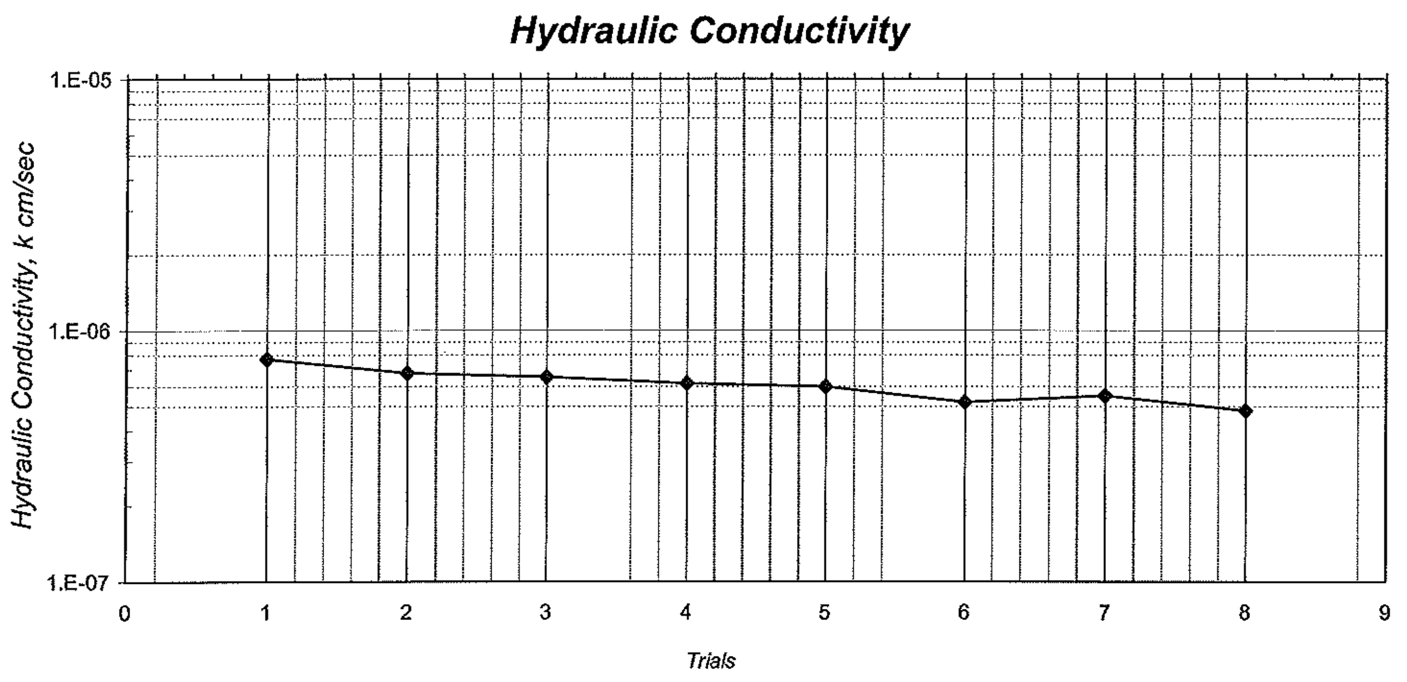
HYDRAULIC CONDUCTIVITY
REPORT

Client / Project Name: ***Locus Technologies / Soil Column Tests - Job #27011 PO 30-12337***	*Project No:* ***081707.00***	*Lab Sample Number:* ***2514H***
Sample ID: ***SCRWA-D 0-4' (rec'd 5/17/08)***		*Report Date:* ***June 6, 2008***



SPECIMEN DATA

SAMPLE ID:	**SCRWA-D 0-4' (rec'd 5/17/08)**	
DESCRIPTION:	Dark Gray Lean Clay with Sand (CL)	
	INITIAL	*FINAL*
HEIGHT, in.	2.9	2.9
DIAMETER, in.	1.9	1.9
WATER CONTENT, %	21.7	22.5
DRY DENSITY, pcf	102	104
SATURATION, %	90	98
(Specific Gravity assumed as 2.7)		
MAXIMUM DRY DENSITY, pcf		
OPTIMUM WATER CONTENT, %		
SPECIFIED COMPACTION, %		
ACHIEVED COMPACTION, %		

COMMENTS:
Tap water used as permeant.
Sample not remolded

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	2 psi
GRADIENT RANGE:	6 - 12
IN / OUT RATIO:	0.85
"B" PARAMETER:	0.98

TRIAL *nos.*	*TIME* *hrs.*	*HYDRAULIC CONDUCTIVITY* *cm / sec*
2	97.4	6.7E-07
3	98.6	6.5E-07
4	100.5	6.1E-07
5	101.7	6.0E-07
6	102.5	5.2E-07
7	104.6	5.5E-07
8	119.5	4.8E-07
AVERAGE LAST 4 :		**5.4E-07**

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L : Labexcel \ Projects \2008 \ 081707 \ 2514H-txk *Print Date:* 07/31/08 *Reviewed By:* SAK *LSN:* **2514H**

DCN: TXK-QC-GRAPH (rev. 5/23/07)

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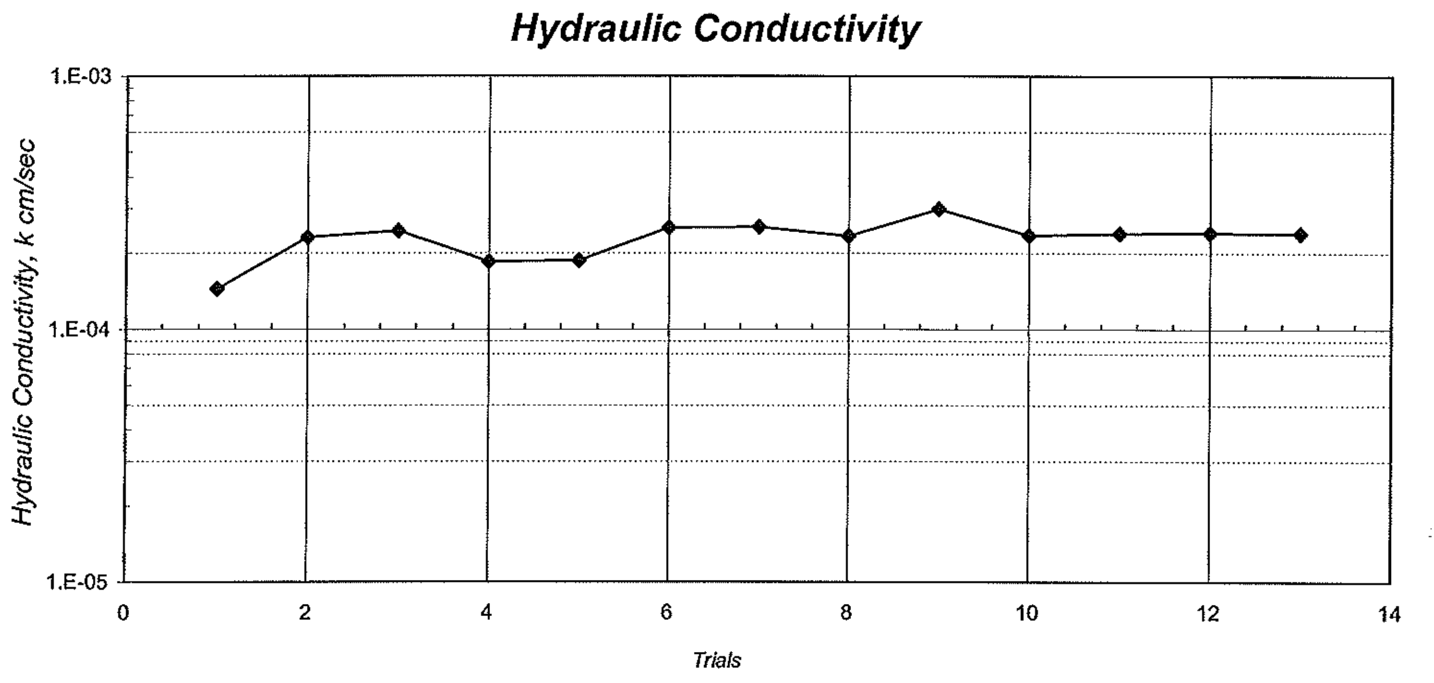
HYDRAULIC CONDUCTIVITY

REPORT

Client / Project Name:	Project No:	Lab Sample Number:
Locus Technologies / Soil Column Tests-Job #27011 PO 30-12337	0817707.00	**2514I**

Sample ID:	Report Date:
DI-A 20' (rec'd 5/17/08)	**June 25, 2008**



SPECIMEN DATA

SAMPLE ID:	**DI-A 20' (rec'd 5/17/08)**	
DESCRIPTION:	Brown Silty Clay (CL-ML)	
	INITIAL	FINAL
HEIGHT, in.	3.0	3.0
DIAMETER, in.	1.9	1.9
WATER CONTENT, %	23.3	29.4
DRY DENSITY, pcf	94	93
SATURATION, %	79	98
(Specific Gravity assumed as 2.7)		
MAXIMUM DRY DENSITY, pcf	94.5	
OPTIMUM WATER CONTENT, %	23.7	
SPECIFIED COMPACTION, %	100.0	
ACHIEVED COMPACTION, %	99.3	

COMMENTS:

Tap water used as permeant.

Sample remolded, readings at 30 second intervals.

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	2 psi
GRADIENT RANGE:	0 - 11
IN / OUT RATIO:	1.00
"B" PARAMETER:	0.96

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
7	48.4	2.5E-04
8	48.4	2.3E-04
9	48.4	3.0E-04
10	48.4	2.3E-04
11	48.4	2.4E-04
12	48.4	2.4E-04
13	48.4	2.4E-04
AVERAGE LAST 4 :		**2.4E-04**

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L : Labexcel \ Projects \2008 \ 081770 \ 2514I-txk

Print Date: 07/31/08

Reviewed By: SAK

LSN:

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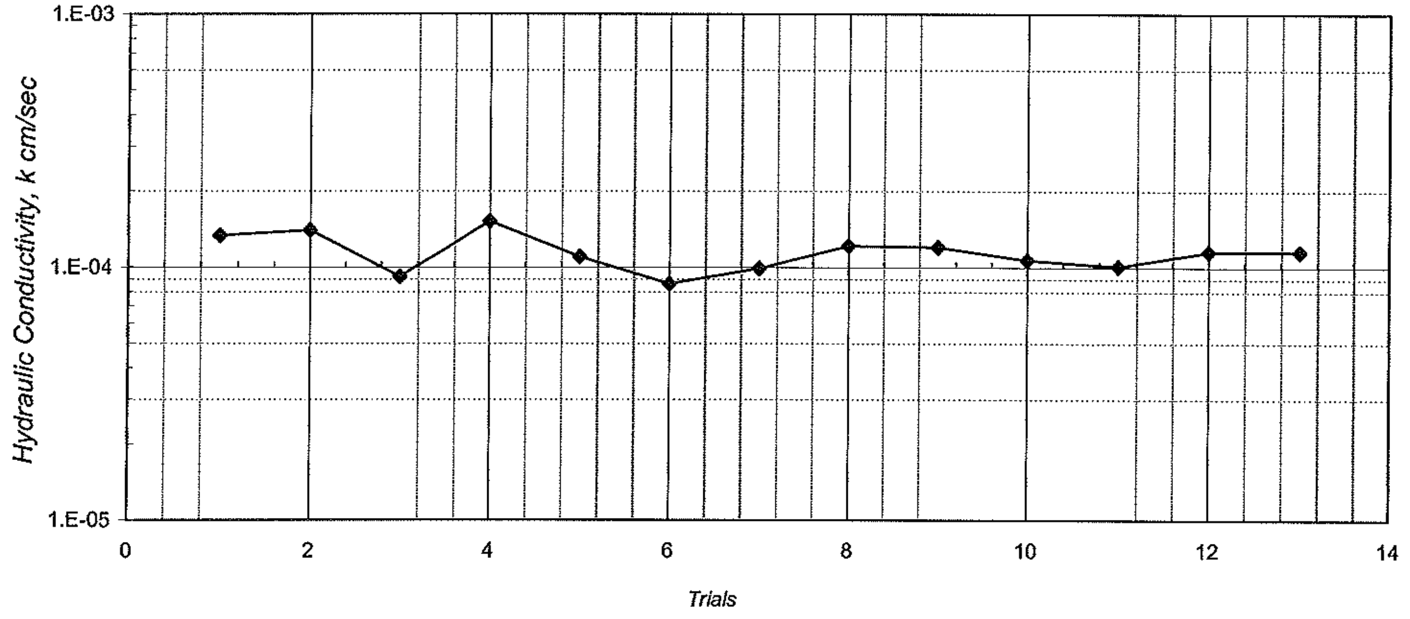
HYDRAULIC CONDUCTIVITY
REPORT

Client / Project Name: **Locus Technologies / Soil Column Tests-Job #27011 PO 30-12337**
Project No: **081707.00**
Lab Sample Number: **2514J**
Sample ID: **DI-B 20-24' (rec'd 5/17/08)**
Report Date: **June 26, 2008**


Hydraulic Conductivity

SPECIMEN DATA

SAMPLE ID:	**DI-B 20-24' (rec'd 5/17/08)**	
DESCRIPTION:	Reddish Brown Clayey Sand (SC)	
	INITIAL	FINAL
HEIGHT, in.	2.7	2.7
DIAMETER, in.	2.4	2.4
WATER CONTENT, %	5.5	18.4
DRY DENSITY, pcf	108	113
SATURATION, %	27	100
(Specific Gravity assumed as 2.7)		
MAXIMUM DRY DENSITY, pcf	99.9	
OPTIMUM WATER CONTENT, %	5.1	
SPECIFIED COMPACTION, %	100.0	
ACHIEVED COMPACTION, %	108.3	

COMMENTS:
Tap water used as permeant. Sample remolded, readings at 30 second intervals. Compacted at greater density than goal keep sample from falling apart.

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	2 psi
GRADIENT RANGE:	1 - 13
IN / OUT RATIO:	0.87
"B" PARAMETER:	1

TRIAL nos.	TIME hrs.	HYDRAULIC CONDUCTIVITY cm / sec
7	24.4	9.8E-05
8	24.4	1.2E-04
9	24.4	1.2E-04
10	24.4	1.1E-04
11	24.5	1.0E-04
12	24.5	1.1E-04
13	24.5	1.1E-04
AVERAGE LAST 4 :		**1.1E-04**

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Print Date: 07/31/08
Reviewed By: SAK
LSN: 2514J

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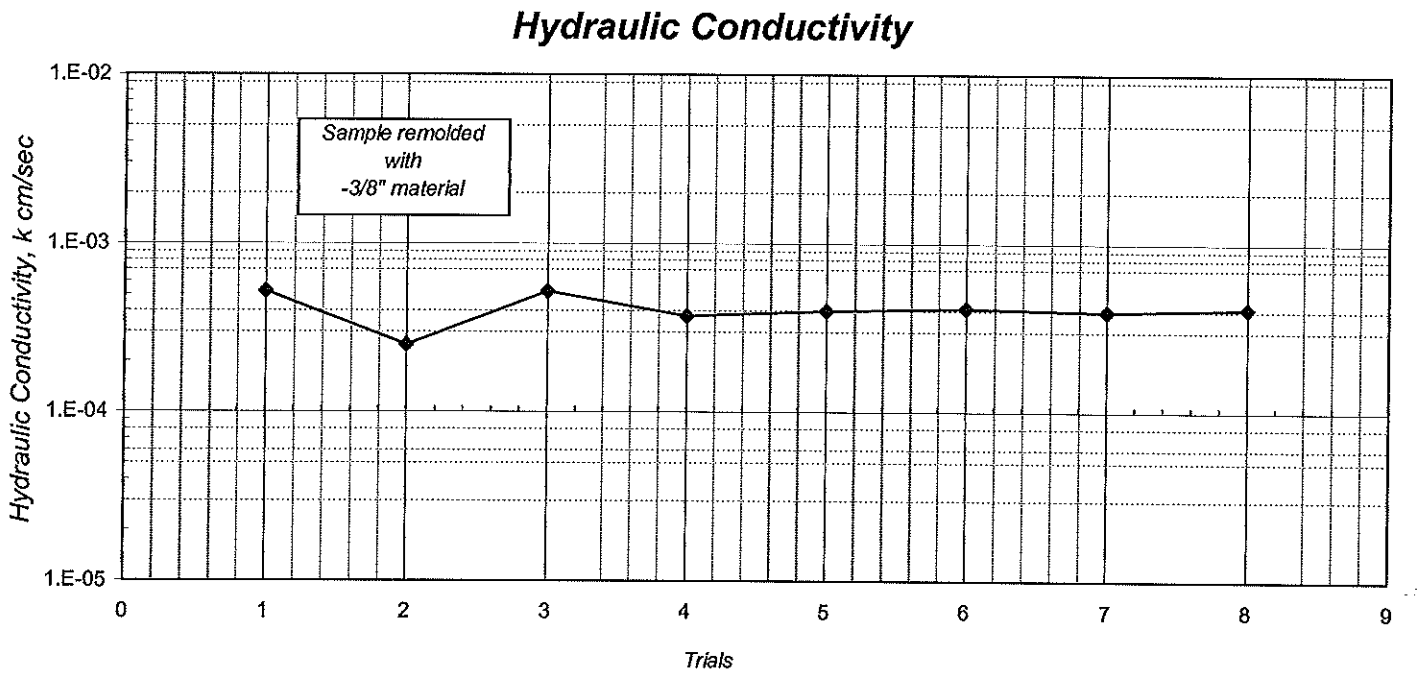
HYDRAULIC CONDUCTIVITY
REPORT

Client / Project Name: **Locus Technologies / Soil Column Tests-Job #27011 PO 12337**	*Project No:* **081707.00**	*Lab Sample Number:* **2514K**
Sample ID: **DI-C 12-16' (rec'd 5/17/08)**		*Report Date:* **June 23, 2008**



Hydraulic Conductivity

SPECIMEN DATA

SAMPLE ID:	**DI-C 12-16' (rec'd 5/17/08)**	
DESCRIPTION:	Brown Silty Clayey Sand w/ Gravel (SC-SM)	
	INITIAL	*FINAL*
HEIGHT, in.	2.9	2.7
DIAMETER, in.	2.4	2.4
WATER CONTENT, %	7.8	26.0
DRY DENSITY, pcf	90	98
SATURATION, %	24	98
(Specific Gravity assumed as 2.7)		
MAXIMUM DRY DENSITY, pcf	88.0	
OPTIMUM WATER CONTENT, %	7.4	
SPECIFIED COMPACTION, %	100.0	
ACHIEVED COMPACTION, %	101.8	

COMMENTS:

Tap water used as permeant. Sample remolded with 21.9% rock removed, readings at 15 second intervals. Compacted at greater density than goal to keep sample from falling apart.

TEST DATA

ASTM D-5084, Method C

EFFECTIVE STRESS:	2 psi
GRADIENT RANGE:	0 - 10
IN / OUT RATIO:	1.02
"B" PARAMETER:	0.97

TRIAL nos.	*TIME hrs.*	*HYDRAULIC CONDUCTIVITY cm / sec*
2	24.2	2.5E-04
3	24.2	5.2E-04
4	24.2	3.7E-04
5	24.2	4.0E-04
6	24.2	4.1E-04
7	24.2	3.9E-04
8	24.2	4.1E-04
AVERAGE LAST 4 :		**4.0E-04**

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L : Labexcel \ Projects \2008 \ 081707 \ 2514K-txk *Print Date:* 08/06/08 *Reviewed By:* SAK *LSN:* **2514K**

DCN: TXK-QC-GRAPH (rev. 6/19/08)

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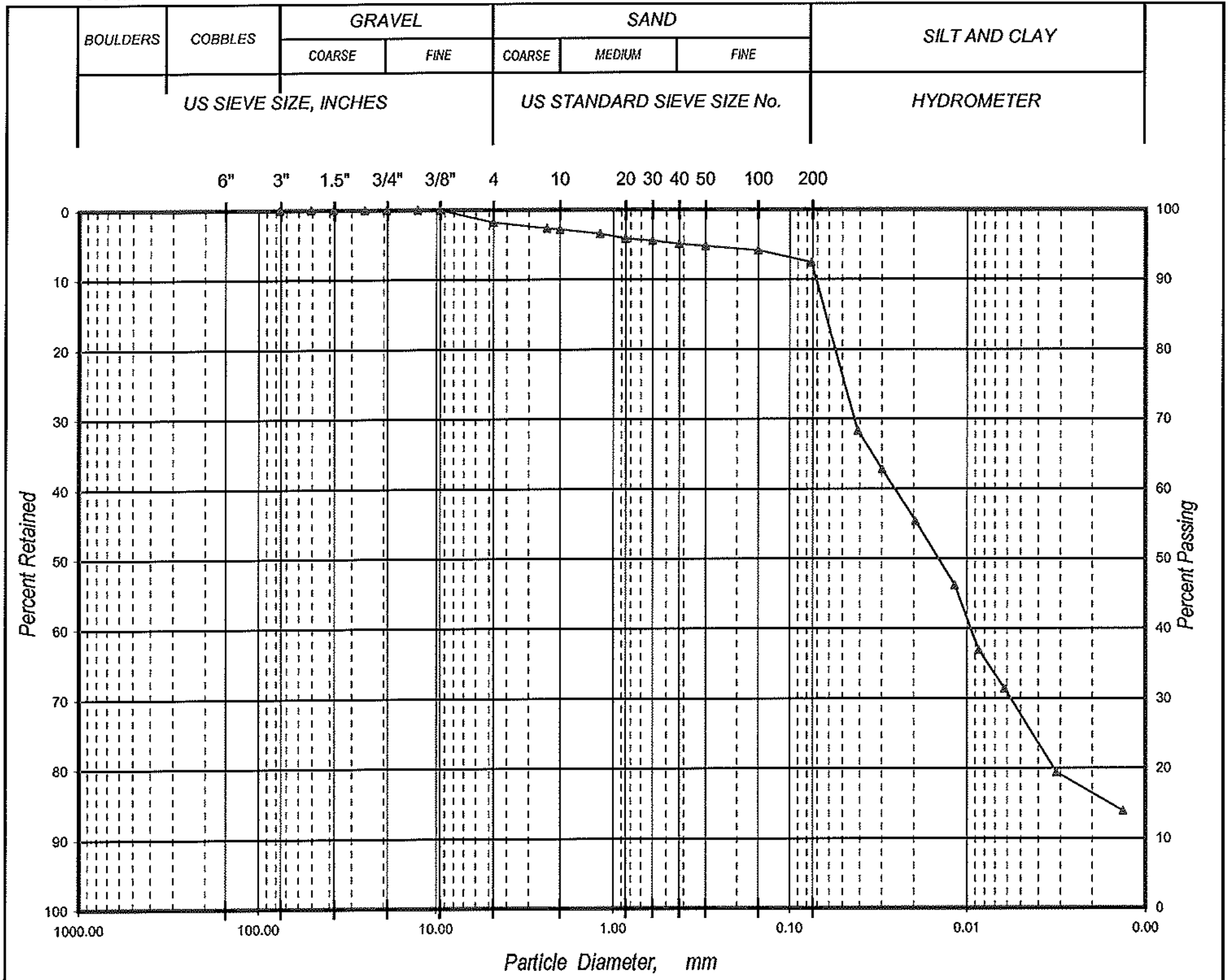
PARTICLE SIZE ANALYSIS
TEST REPORT
ASTM D-422

Client:	LOCUS TECHNOLOGIES	Project No:	081707.00	Lab Sample No:	**2514A**
Project Name:	SOIL COLUMN TESTS- JOB # 27011 PO 30-12337			Report Date:	2514A



Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
▲	SJ/SC-A 24' (rec'd 5/17/08)	Brown Lean Clay (CL)	1.8	5.8	92.5

Size Passing, mm D_{60} = 0.03 D_{30} = 0.01 D_{10} = N/A 5 micron (%) = 25

Coefficient of Curvature, C_c: N/A Coefficient of Uniformity, C_u: N/A Fineness Modulus = 0.23

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

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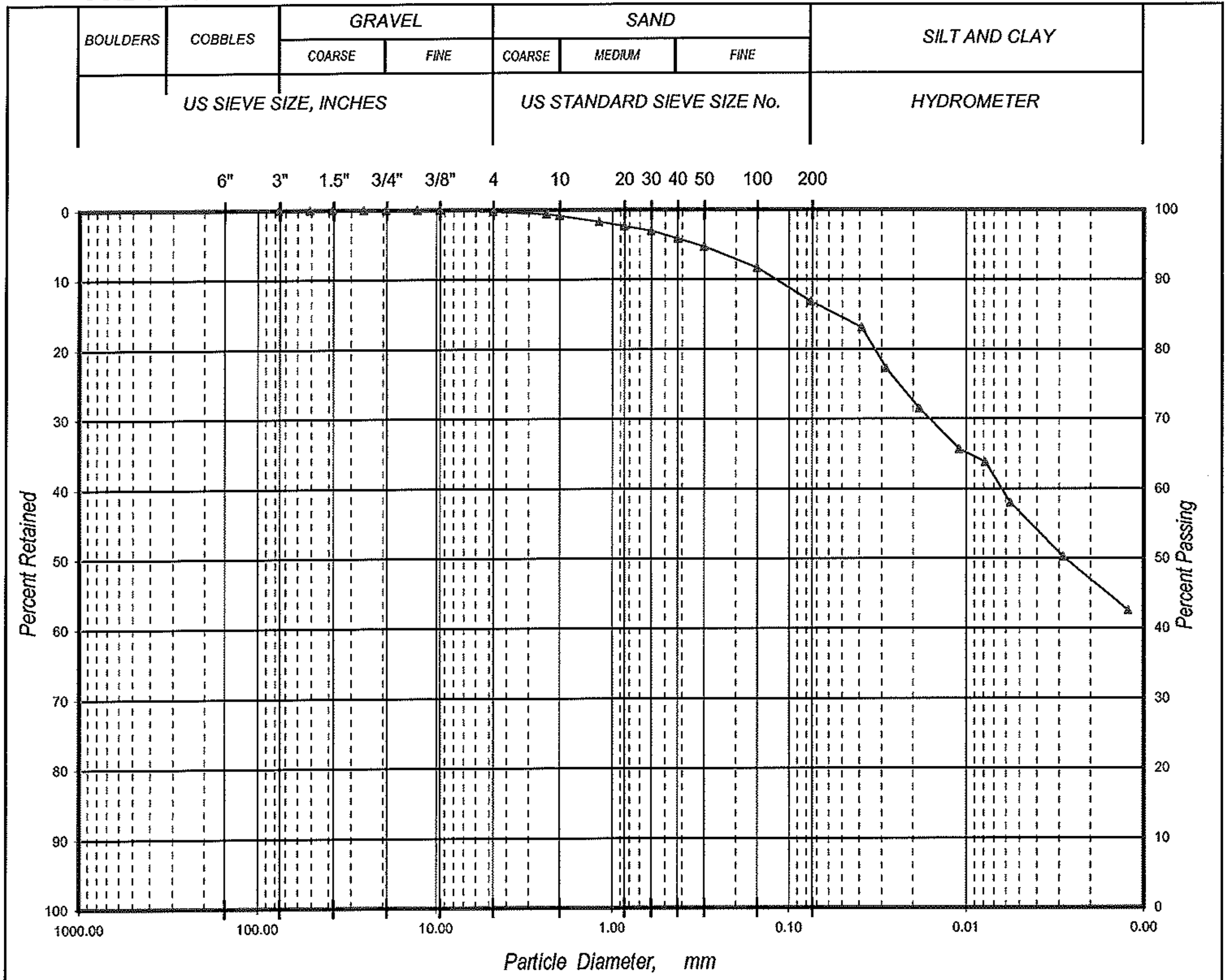
PARTICLE SIZE ANALYSIS
TEST REPORT
ASTM D-422

Client: LOCUS TECHNOLOGIES	Project No: 081707.00	Lab Sample No: **2514B**
Project Name: SOIL COLUMN TEST- JOB # 27011 PO 30-12337		Report Date: June 9, 2008



Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
▲	SJ/SC-B 0-4' (rec'd 5/17/08)	Brown Lean Clay (CL)	0.2	12.9	86.9

Size Passing, mm D_{60} = 0.01 D_{30} = N/A D_{10} = N/A 5 micron (%) = 54

Coefficient of Curvature, C_c: N/A Coefficient of Uniformity, C_u: N/A Fineness Modulus = 0.19

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

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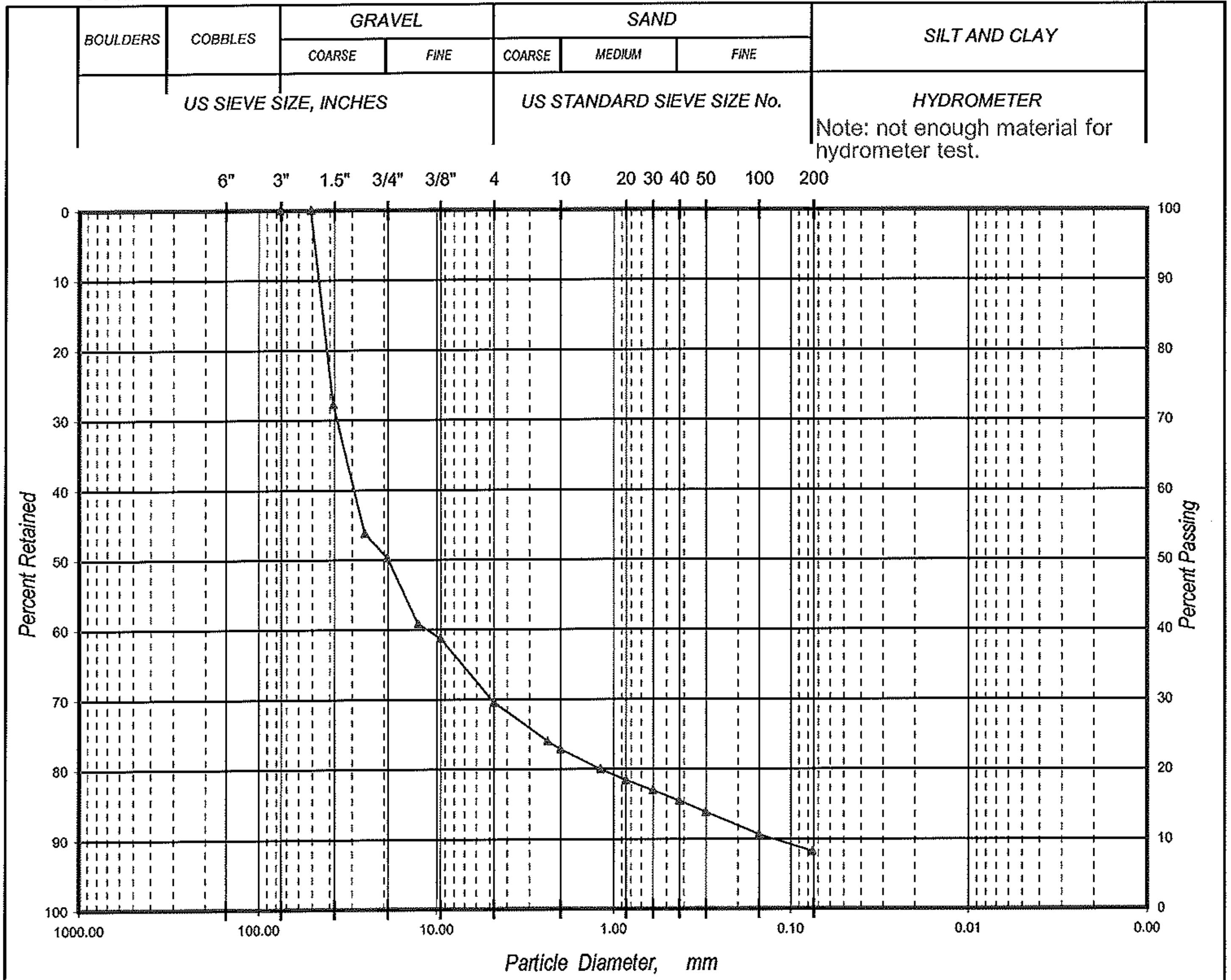
PARTICLE SIZE ANALYSIS
TEST REPORT
ASTM D-422

Client: LOCUS TECHNOLOGIES	Project No: 081707.00	Lab Sample No: **2514C**
Project Name: SOIL COLUMN TESTS- JOB # 27011 PO 30-12337		Report Date: July 15, 2008



Note: not enough material for hydrometer test.

Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
▲	SJ/SC-C 4-8' (rec'd 5/17/08)	Brown Poorly Graded Gravel w/ Silt & Sand (GP-GM)	70.5	21.3	8.2

Size Passing, mm D_{60} = 29.72 D_{30} = 5.01 D_{10} = 0.13

Coefficient of Curvature, C_c: 6.38 Coefficient of Uniformity, C_u: 224.00 Fineness Modulus = 6.24

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

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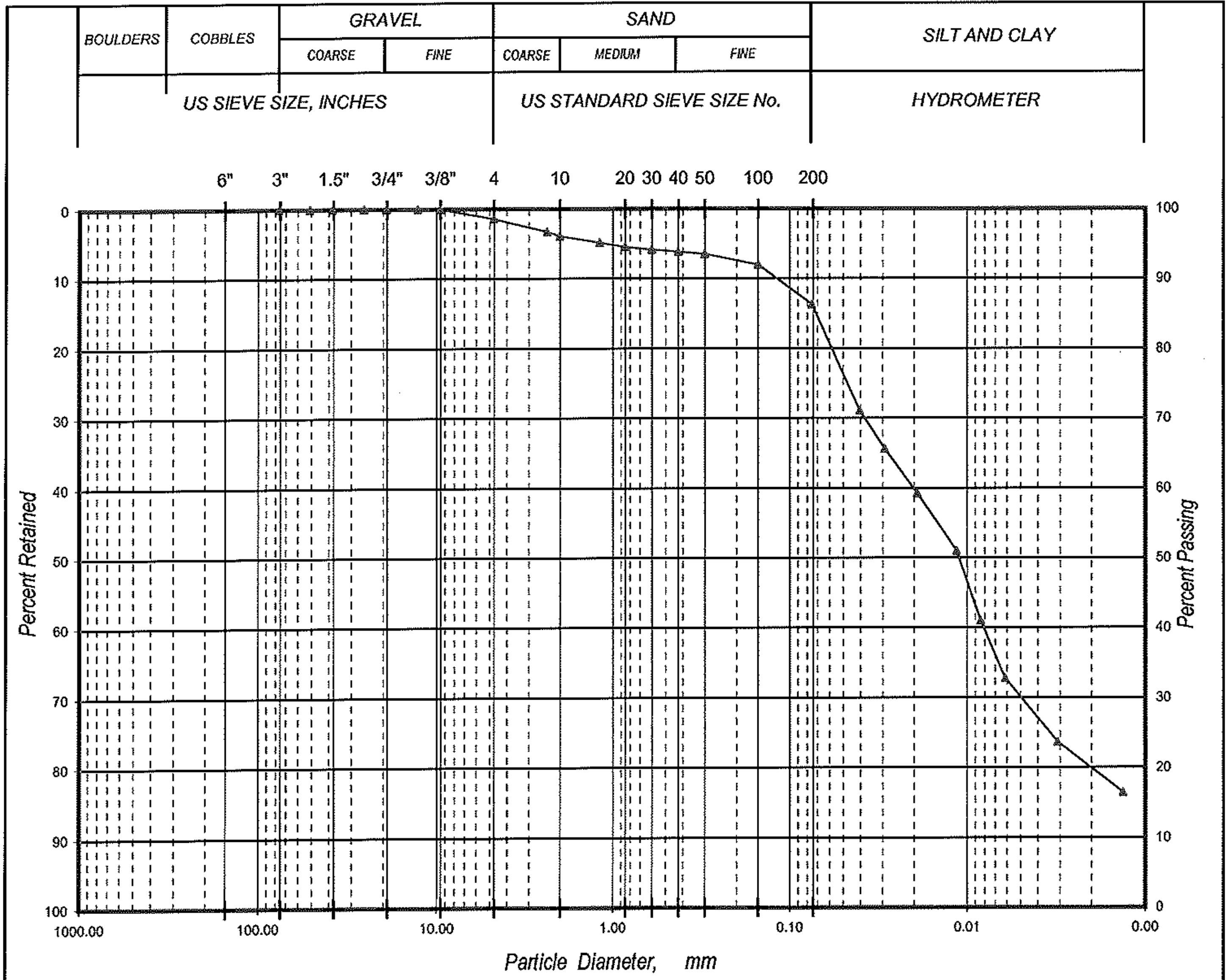
PARTICLE SIZE ANALYSIS

TEST REPORT

ASTM D-422

Client: LOCUS TECHNOLOGIES
Project No: 081707.00
Lab Sample No: **2514D**
Project Name: SOIL COLUMN TEST- JOB # 27011 PO 30-12337
Report Date: June 10, 2008



Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
▲	SJ/SC-D 20-24' (rec'd 5/17/08)	Brown Silty Clay (CL-ML)	1.4	12.3	86.3

Size Passing, mm D_{60} = 0.02 D_{30} = 0.01 D_{10} = N/A 5 micron (%) = 28

Coefficient of Curvature, C_c: N/A Coefficient of Uniformity, C_u: N/A Fineness Modulus = 0.30

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

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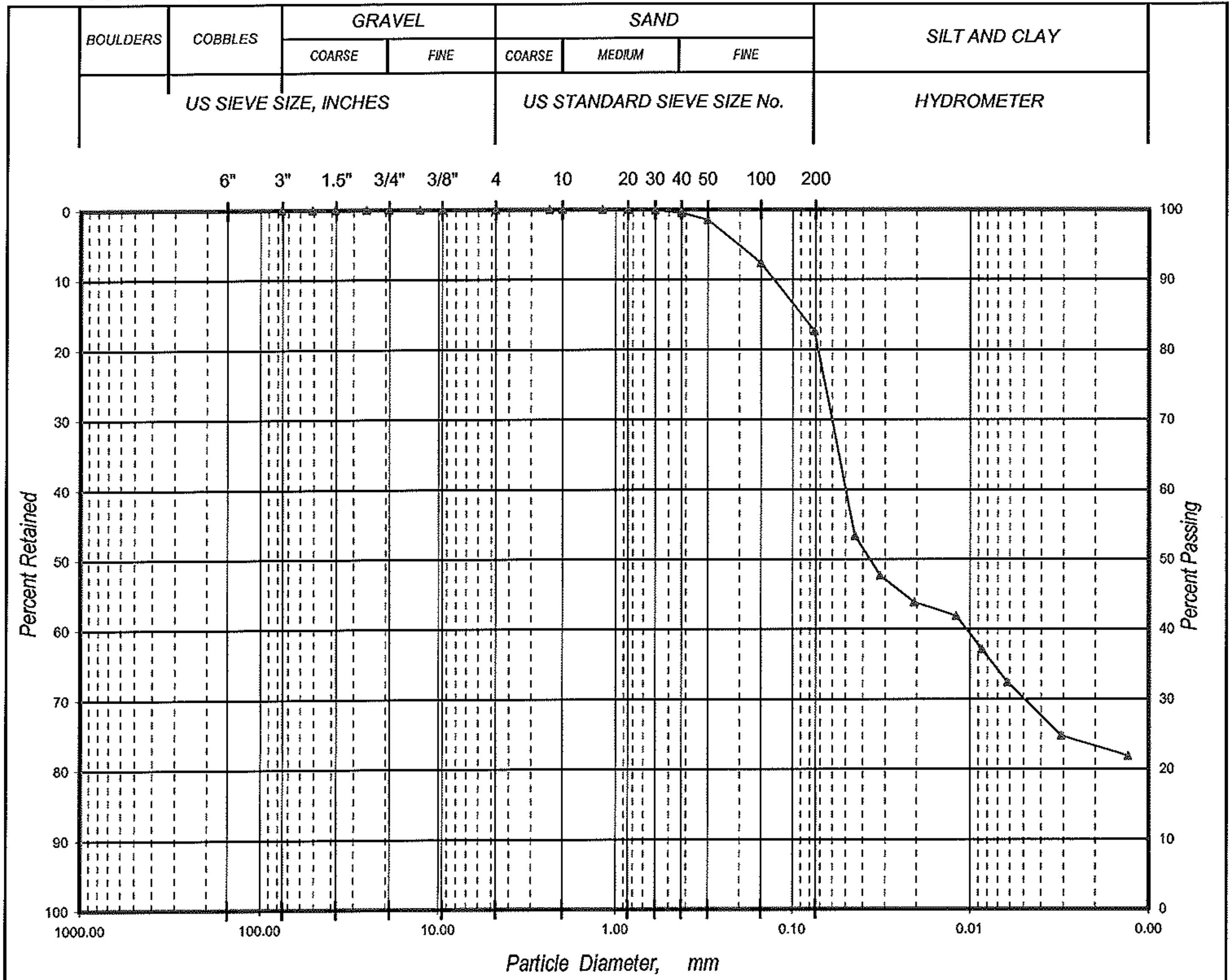
PARTICLE SIZE ANALYSIS
TEST REPORT
ASTM D-422

Client: LOCUS TECHNOLOGIES	Project No: 081707.00	Lab Sample No: **2514E**
Project Name: SOIL COLUMN TEST- JOB # 27011 PO 30-12337		Report Date: June 10, 2008



Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
▲	SCRWA-A 28' (rec'd 5/17/08)	Dark Gray Lean Clay with Sand (CL)	0.0	17.4	82.6

Size Passing, mm D_{60} = 0.05 D_{30} = 0.01 D_{10} = N/A 5 micron (%) = 29

Coefficient of Curvature, C_c: N/A Coefficient of Uniformity, C_u: N/A Fineness Modulus = 0.09

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

L : Labexcel \ Projects \ 2008 \ 081707 \ 2514E-MA Print Date: 07/31/08 Reviewed By: LSN: **2514E**

DCN: MA-rp (rev. 6/04/05)

SAK

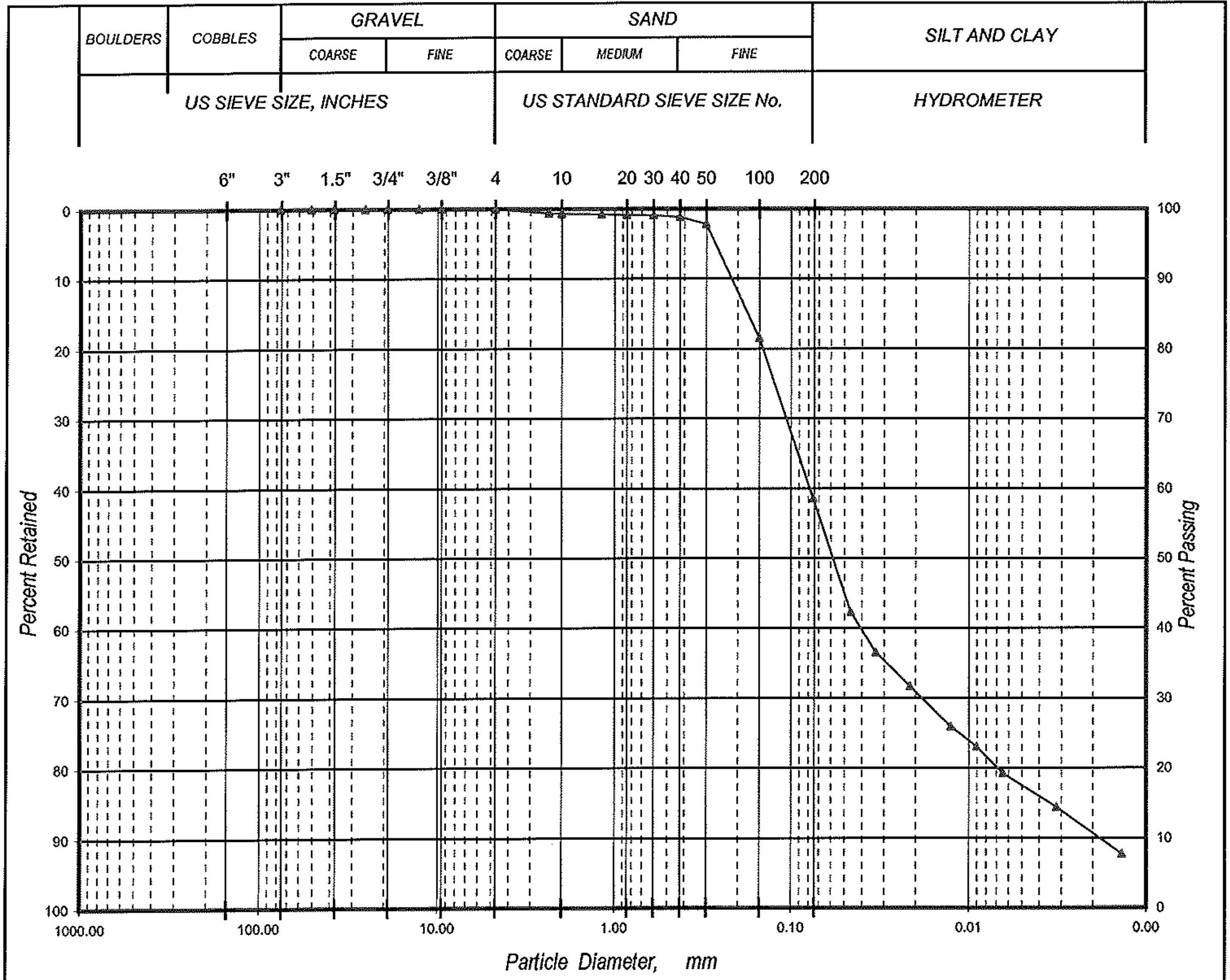
Vector Engineering Inc.
143E Spring Hill Drive, Grass Valley, CA 95945 530-272-2448
LABORATORY SERVICES

PARTICLE SIZE ANALYSIS

TEST REPORT

ASTM D-422

Client: LOCUS TECHNOLOGIES	Project No: 081707.00	Lab Sample No: **2514F**
Project Name: SOIL COLUMN TEST- JOB # 27011 PO 30-12337		Report Date: July 11, 2008



Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
▲	SCRWA-B 4-8' (rec'd 5/17/08)	Brown Silt w/ Sand (ML)	0.0	41.5	58.5

Size Passing, mm D_{60} = 0.08 D_{30} = 0.02 D_{10} = 0.00 5 micron (%) = 17

Coefficient of Curvature, C_c: 2.22 Coefficient of Uniformity, C_u: 40.07 Fineness Modulus = 0.23

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

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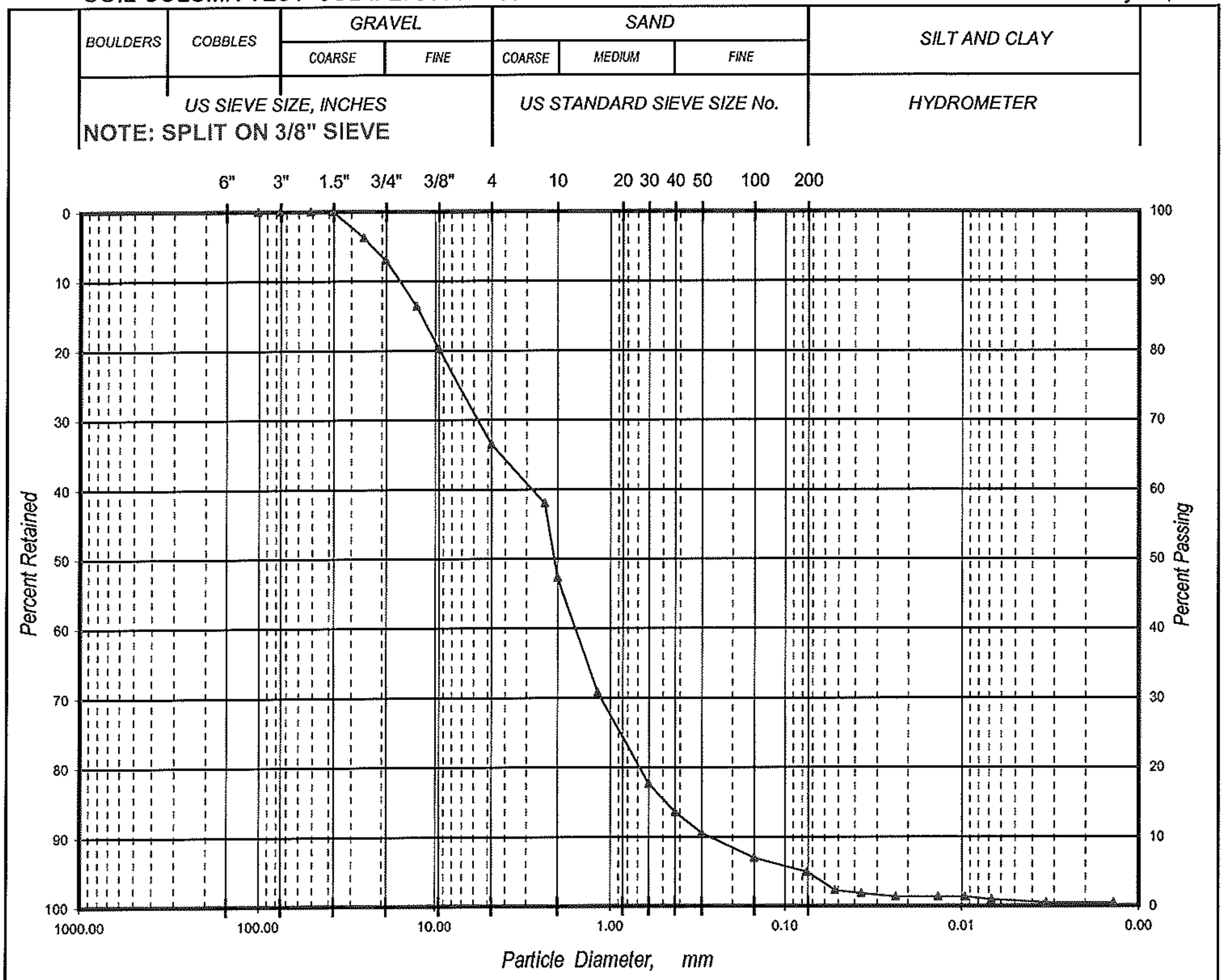
PARTICLE SIZE ANALYSIS
TEST REPORT
ASTM D-422

Client : LOCUS TECHNOLOGIES	Project No: 081707.00	Lab Sample No: **2514G**
Project Name: SOIL COLUMN TEST- JOB # 27011 PO 30-12337		Report Date: July 11, 2008



Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
▲	SCRWA-C 0-4' (rec'd 5/17/08)	Brown Well-Graded Sand w/ Gravel (SW)	33.6	61.5	4.9

Size Passing, mm D_{60} = 2.94 D_{30} = 1.15 D_{10} = 0.28 5 micron (%) = 1

Coefficient of Curvature, C_c: 1.60 Coefficient of Uniformity, C_u: 10.51 Fineness Modulus = 3.88

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

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L : Labexcel \ Projects \ 2008 \ 081707 \ 2514G-MA	Print Date: 07/31/08	Reviewed By: SAK	LSN: **2514G**

Vector Engineering Inc.
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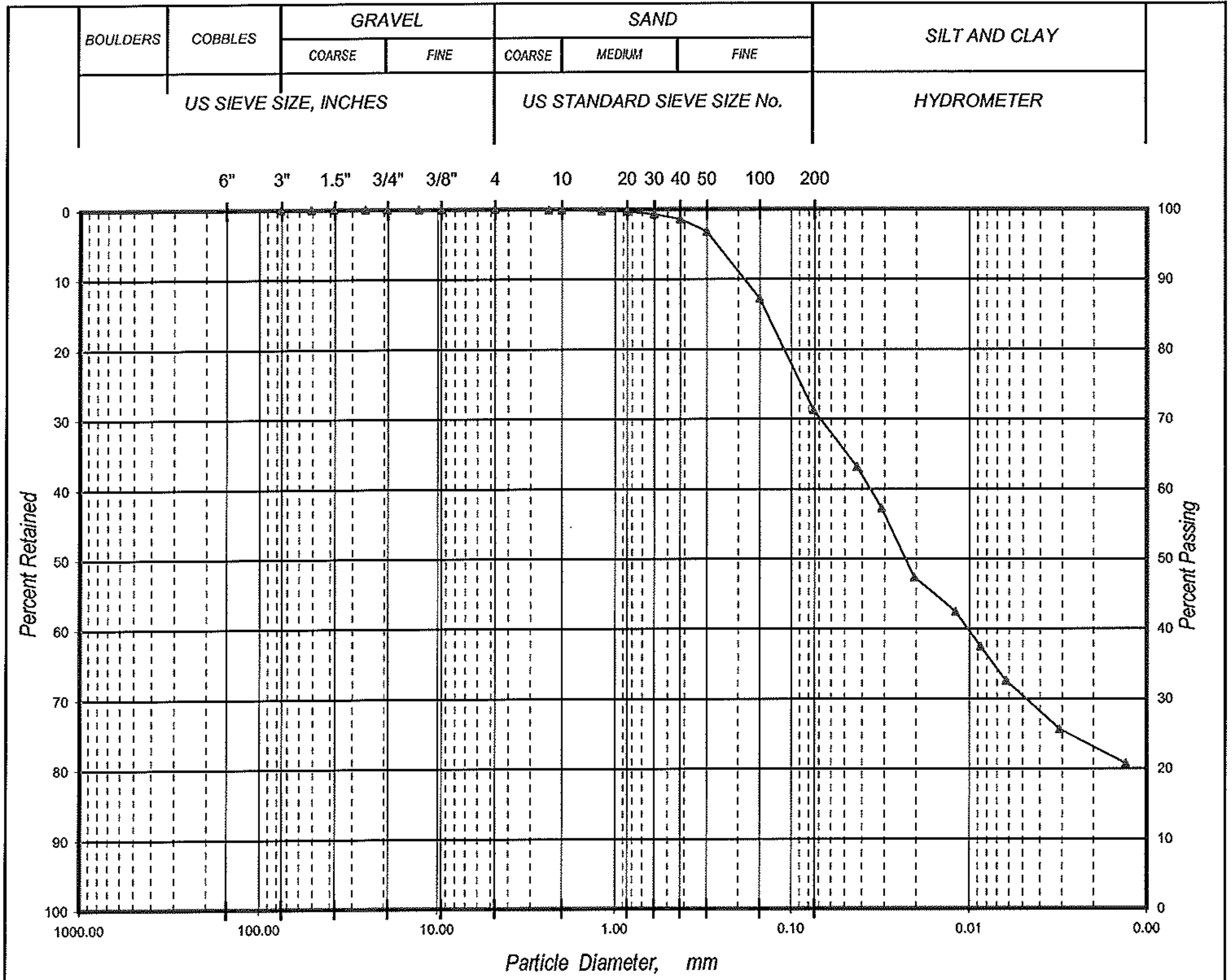
LABORATORY SERVICES

PARTICLE SIZE ANALYSIS
TEST REPORT
ASTM D-422

Client: LOCUS TECHNOLOGIES
Project No: 081707.00
Lab Sample No: **2514H**
Project Name: SOIL COLUMN TEST- JOB # 27011 PO 30-12337
Report Date: June 10, 2008



Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
△	SCRWA-D 0-4' (rec'd 5/17/08)	Dark Gray Lean Clay with Sand (CL)	0.0	28.8	71.2

Size Passing, mm D_{60} = 0.04 D_{30} = 0.01 D_{10} = N/A 5 micron (%) = 29

Coefficient of Curvature, C_c: N/A Coefficient of Uniformity, C_u: N/A Fineness Modulus = 0.17

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

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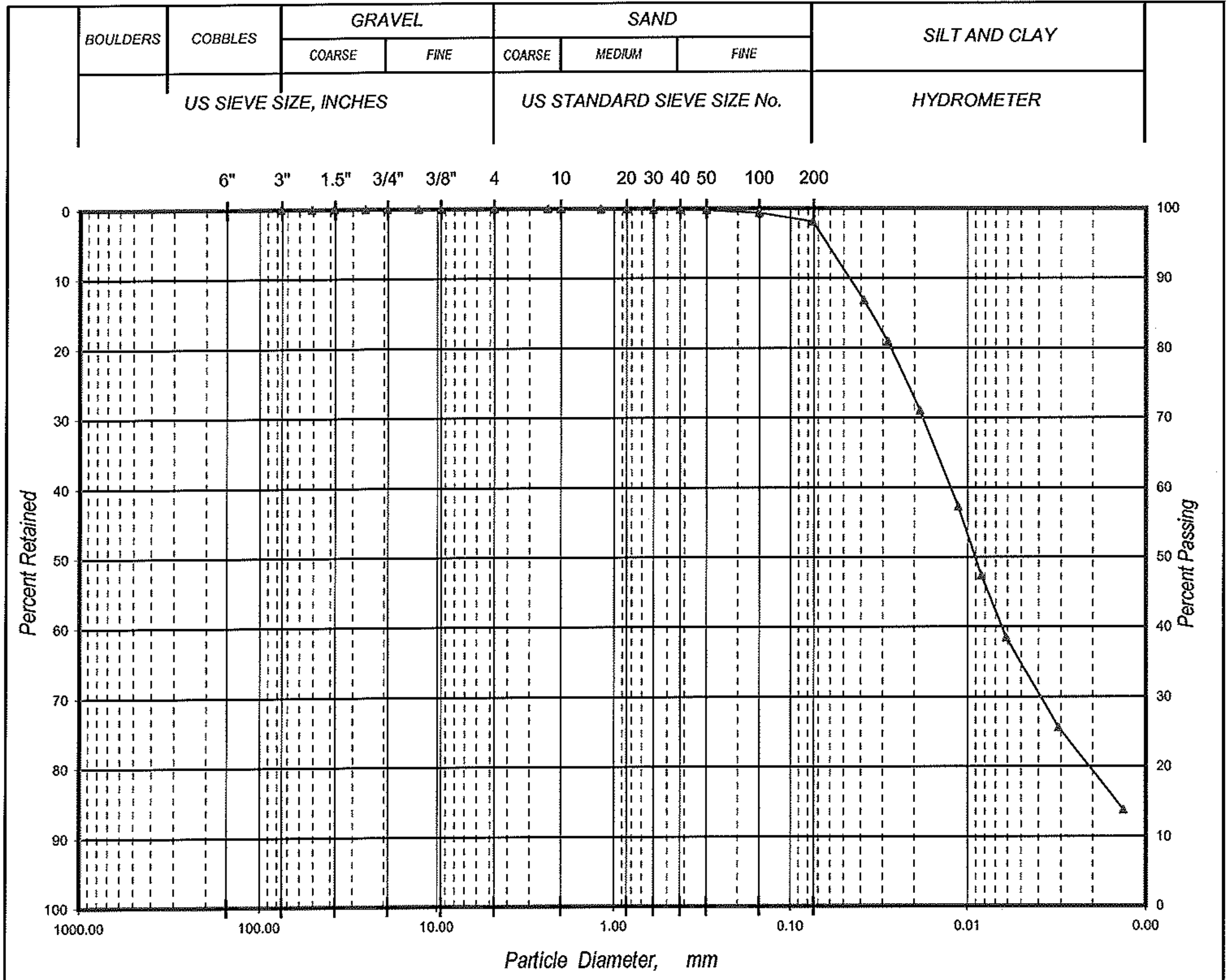
LABORATORY SERVICES

PARTICLE SIZE ANALYSIS
TEST REPORT
ASTM D-422

Client : LOCUS TECHNOLOGIES	Project No: 081707.00	Lab Sample No: **2514I**
Project Name: SOIL COLUMN TEST- JOB # 27011 PO 30-12337		Report Date: July 11, 2008



Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
▲	DI-A 20' (rec'd 5/17/08)	Brown Silty Clay (CL-ML)	0.0	1.9	98.1

Size Passing, mm D_{60} = 0.01 D_{30} = 0.00 D_{10} = N/A 5 micron (%) = 32

Coefficient of Curvature, C_c: N/A Coefficient of Uniformity, C_u: N/A Fineness Modulus = 0.01

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

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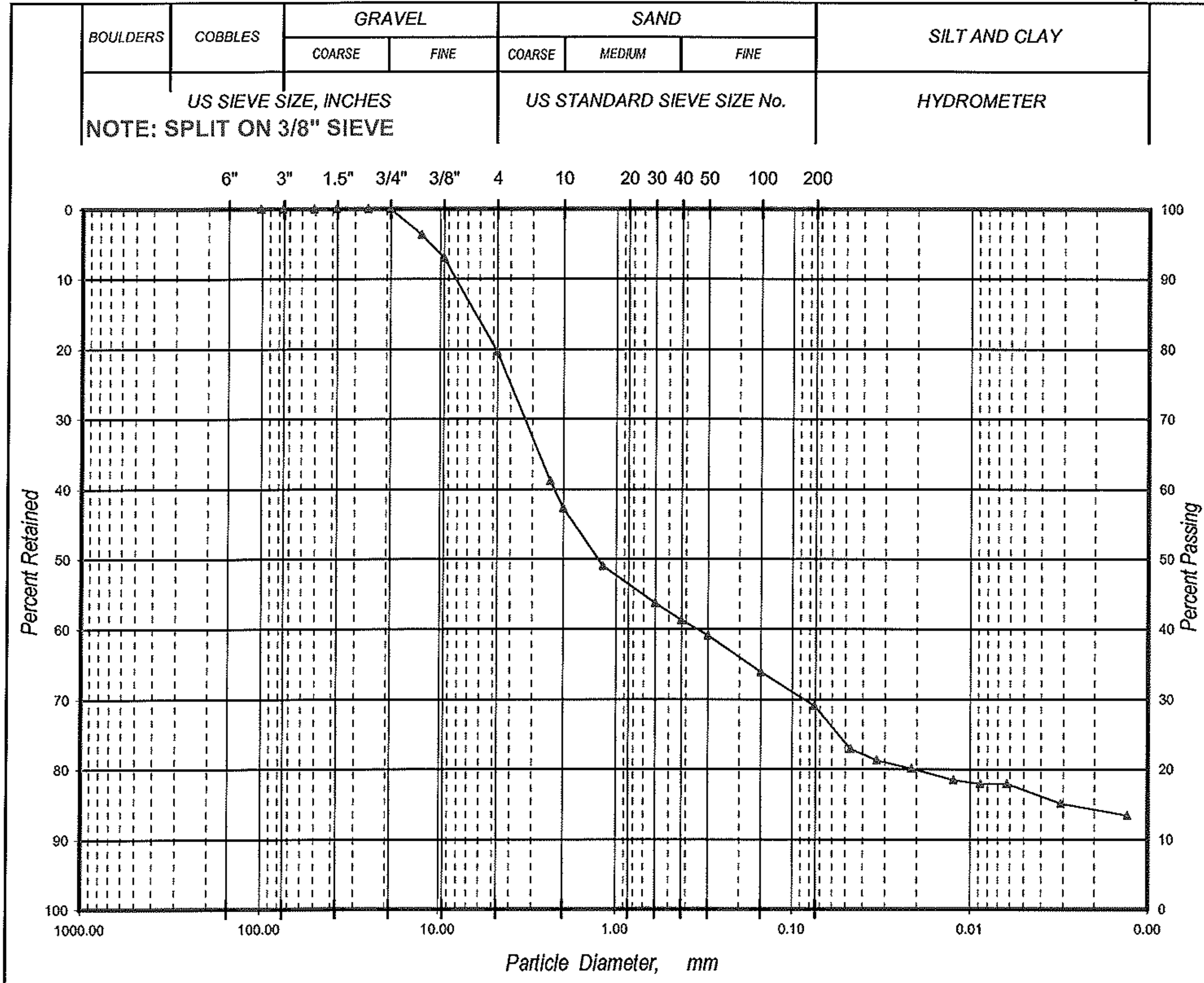
LABORATORY SERVICES

PARTICLE SIZE ANALYSIS
TEST REPORT
ASTM D-422

Client : LOCUS TECHNOLOGIES	Project No: 081707.00	Lab Sample No: **2514J**
Project Name: SOIL COLUMN TEST- JOB # 27011 PO 30-12337		Report Date: July 11, 2008



Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
▲	DI-B 20-24' (rec'd 5/17/08)	Reddish Brown Clayey Sand w/ Gravel (SC)	20.4	50.5	29.1

Size Passing, mm D_{60} = 2.26 D_{30} = 0.09 D_{10} = N/A 5 micron (%) = 16

Coefficient of Curvature, C_c: N/A Coefficient of Uniformity, C_u: N/A Fineness Modulus = 2.57

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

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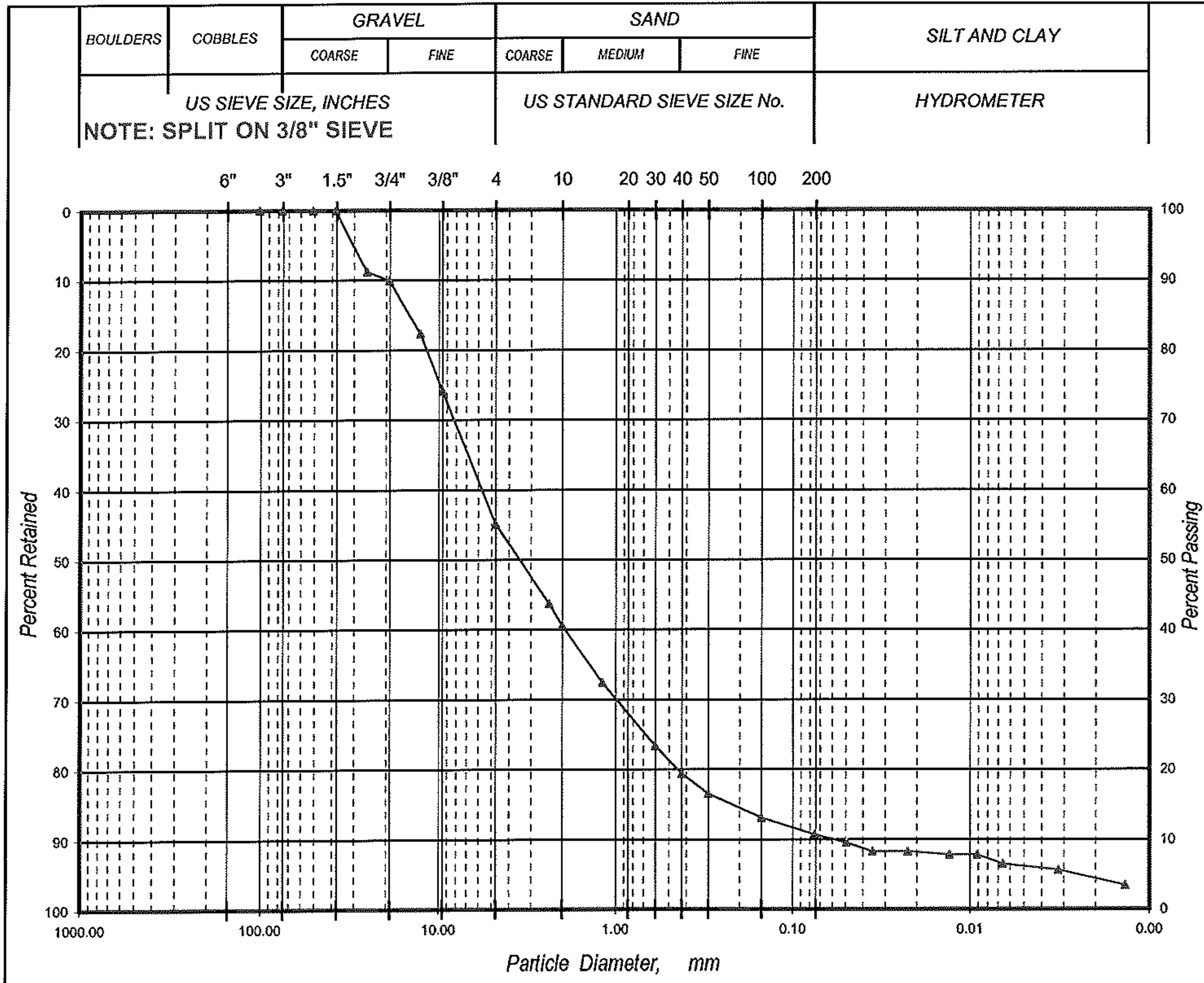
LABORATORY SERVICES

PARTICLE SIZE ANALYSIS
TEST REPORT
ASTM D-422

Client : LOCUS TECHNOLOGIES	Project No: 081707.00	Lab Sample No: **2514K**
Project Name: SOIL COLUMN TEST- JOB # 27011 PO 30-12337		Report Date: July 11, 2008



Symbol	Sample ID	* Description	% Gravel	% Sand	% Silt - Clay
▲	DI-C 12-16' (rec'd 5/17/08)	Brown Well-Graded Sand w/ Silty Clay and Gravel (SW-SC)	25.8	63.5	10.7

Size Passing, mm D_{60} = 5.98 D_{30} = 1.03 D_{10} = 0.06 5 micron (%) = 6

Coefficient of Curvature, C_c: 2.93 Coefficient of Uniformity, C_u: 99.76 Fineness Modulus = 4.04

* Visual Classification based on ASTM D-2488

Note: * Percentages are +/- 0.1% based on computer rounding as allowed by ASTM D-6026-01 Section 5.2.3.

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Vector Engineering, Inc. Effluent and Source Water Report

143E Spring Hill Dr., Grass Valley, CA, 530-272-2448
LABORATORY SERVICES

Client: Locus Technologies
Project No: 031702.19
Lab Sample Number: **2514**
Project Name:
Description: Soil Column tests-Job #27011 PO 30-1233
Report Date: July 16, 2008

LL 2514 — **Vector Lab Water Testing**

Initial Test

	Hold Time >			15 min	15 min			
	Sample ID	**Date**	**Time**	**DO mg/L**	**CL mg/L**	**pH**	**ORP mv**	**Notes**
A	SJ/SC-A	6/24/08	10:16	8.4	0.00	7.6	160	1st PV slightly cloudy
B	SS/SC-B	7/7/08	10:48	8.4	0.35	8.00	178	1st PV slightly cloudy
C	SJ/SC-C	6/10/08	11:35	8.3	1.24	7.85	156	1st PV nearly clear
D	SJ/SC-D w/ gypsum	6/9/08	16:21	8.3	0.00	8.02	164	1st PV slightly cloudy
E	SCRWA-A							
F	SCRWA-B	6/13/08	12:21	8.3	0.36	7.28	172	1st PV nearly clear
G	SCRWA-C	6/11/08	12:53	8.5	0.40	7.37	167	1st PV nearly clear
H	SCRWA-D w/ gypsum	6/9/08	10:33	8.5	1.36	7.92	151	1st PV moderately cloudy
I	DI-A	7/7/08	11:30	8.1	1.72	7.93	132	1st PV moderately cloudy
J	DI-B							
K	DI-C	6/12/08	8:23	8.7	1.85	7.43	156	1st PV very cloudy
Source Water								
L	SJ/SC-1 initial	6/27/08	22:30	8.1	0.00	7.29	244	clear
N	SCRWA-1 initial	6/24/08	16:15	8.4	0.00	7.48	217	clear
P	DI-1 initial	6/24/08	19:00	8.3	0.00	6.49	245	clear

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Print Date: 08/06/08
Entered By: SLS
Reviewed By: MR
LSN: **2514**

Vector Engineering, Inc. Effluent and Source Water Report

143E Spring Hill Dr., Grass Valley, CA, 530-272-2448
LABORATORY SERVICES

Client: Locus Technologies
Project No: 031702.19
Lab Sample Number: 2514
Project Name: Soil Column tests-Job #27011 PO 30-1233
Description:
Report Date: July 16, 2008

LL 2514 — **Vector Lab Water Testing**

Follow-up Test

	Hold Time >			15 min	15 min			
	Sample ID	**Date**	**Time**	**DO mg/L**	**CL mg/L**	**pH**	**ORP mv**	**Notes**
A	SJ/SC-A							
B	SS/SC-B							
C	SJ/SC-C	6/13/08	11:13	8.5	0.52	7.69	149	10th PV nearly clear
D	SJ/SC-D w/ gypsum	6/11/08	13:31	8.6	0.00	8.04	171	10th PV nearly clear
E	SCRWA-A							
F	SCRWA-B	6/23/08	11:38	5.3	0.00	7.48	123	10th PV nearly clear
G	SCRWA-C	6/27/08	15:30	8.3	0.02	7.40	164	10th PV nearly clear
H	SCRWA-D w/ gypsum	6/13/08	11:10	8.4	0.00	7.77	134	10th PV clear
I	DI-A							
J	DI-B							
K	DI-C	6/27/08	23:30	4.2	1.33	7.31	195	10th PV very cloudy
Source Water								
M	SJ/SC-1 initial	7/1/08	9:40	8.6	0.00	8.00	221	clear
O	SCRWA-1 initial	7/1/08	10:00	8.7	0.00	8.07	230	clear
Q	DI-1 initial	7/1/08	10:20	8.6	0.00	7.04	297	clear

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L:Labexcel \ Projects \ 2003 \ 031702 \ 2514-DCN.xls
Print Date: 08/06/08
Entered By: SLS
Reviewed By: MR
LSN: 2514
DCN: DCN (rev. 01/31/01)

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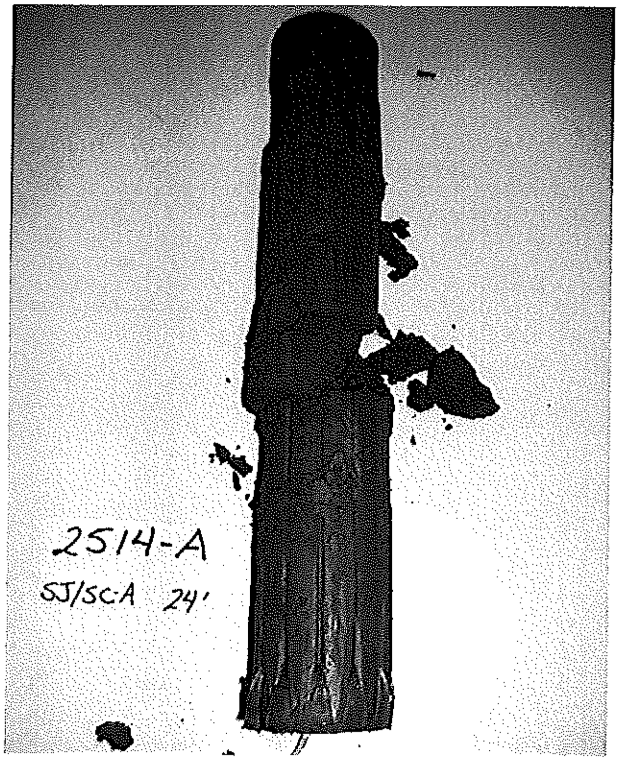
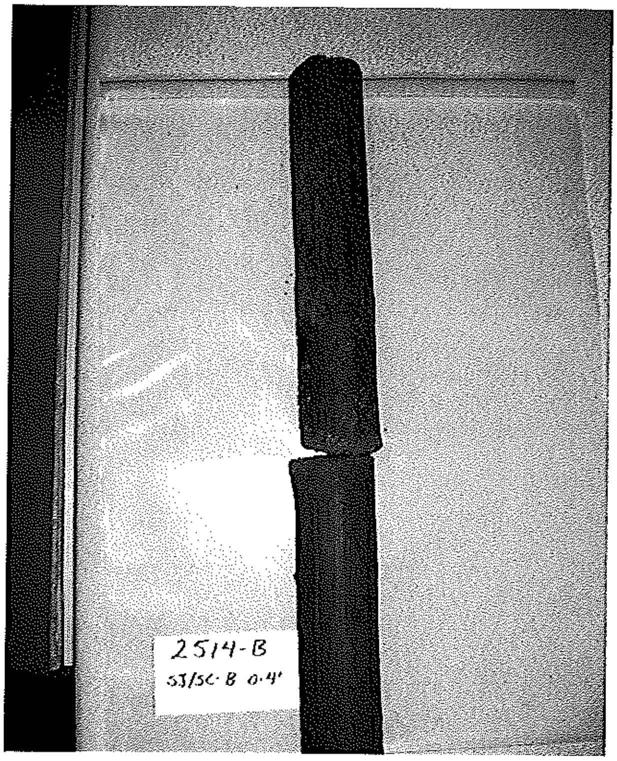
143E Spring Hill Dr., Grass Valley, CA, 530-272-2448
LABORATORY SERVICES

Initial Photos Prior to Remolding

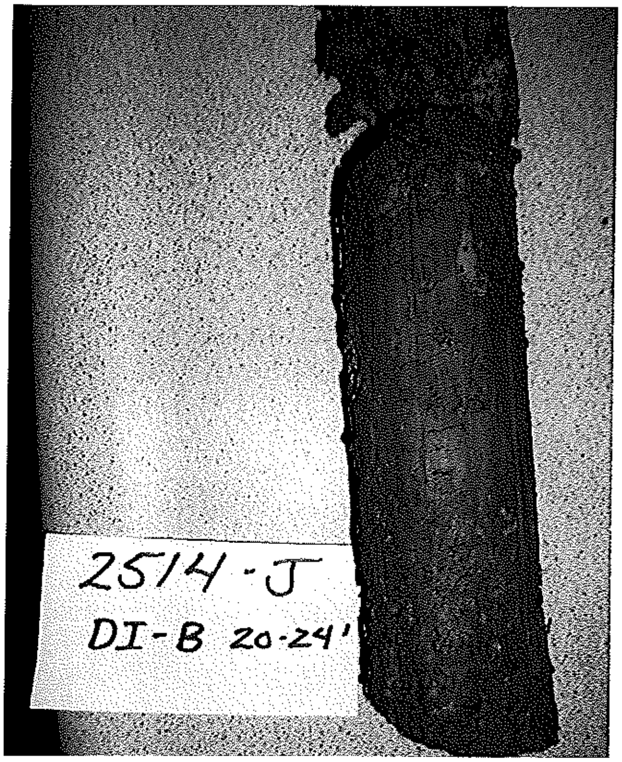
Client: Locus Technologies	Project No: 81707.00	Lab Sample Number: **2514**
Project Name: Description: Soil Column Tests Job#27011 PO 30-1 Tube Samples		Report Date: July 31, 2008

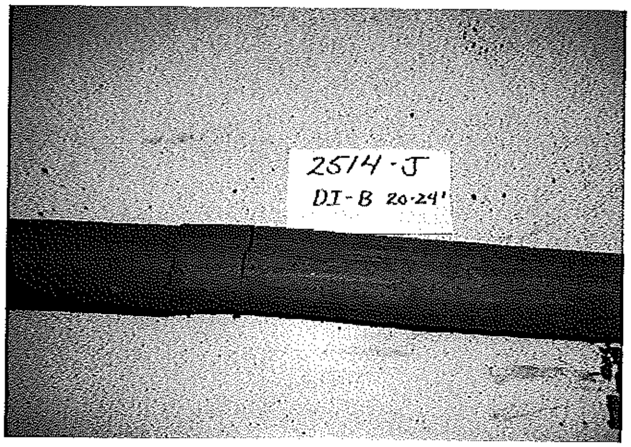


2514-A, SJ/SC-A, depth 24'



2514-B, SJ/SC-B, depth 0-4'





2514-J, DI-B, depth 20-24'

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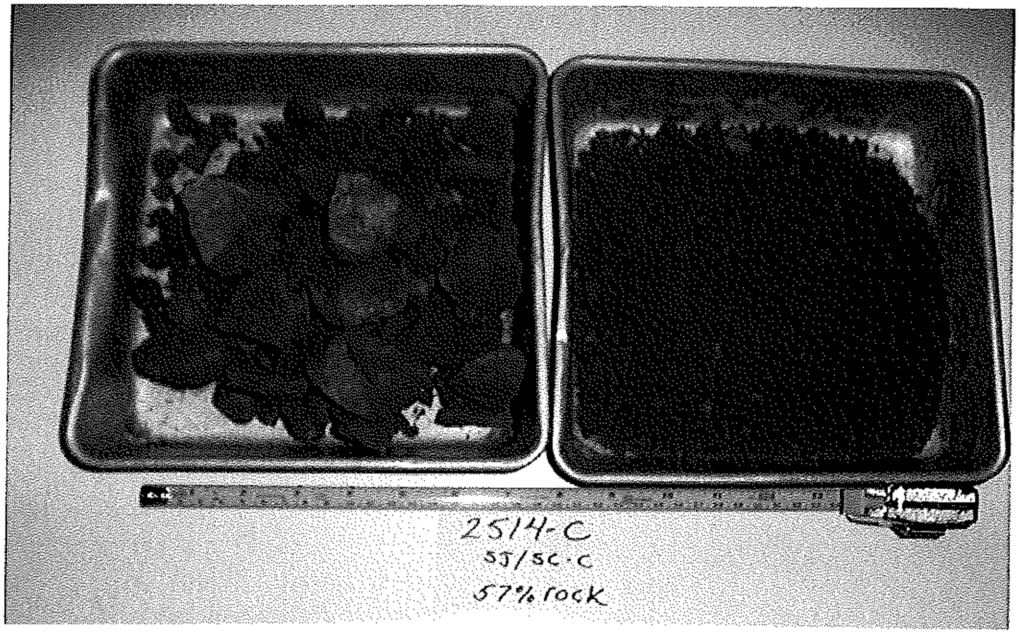
LABORATORY SERVICES

Initial Photos Prior to Remolding

Client : Locus Technologies		Project No: 81707.00	Lab Sample Number: **2514**
Project Name: Soil Column Tests Job#27011 PO 30-1 Tube Samples	Description:		Report Date: July 31, 2008



2514-C, SJ/SC-C, depth 4-8'
sample contained 58.8% rock
>3/8" diameter

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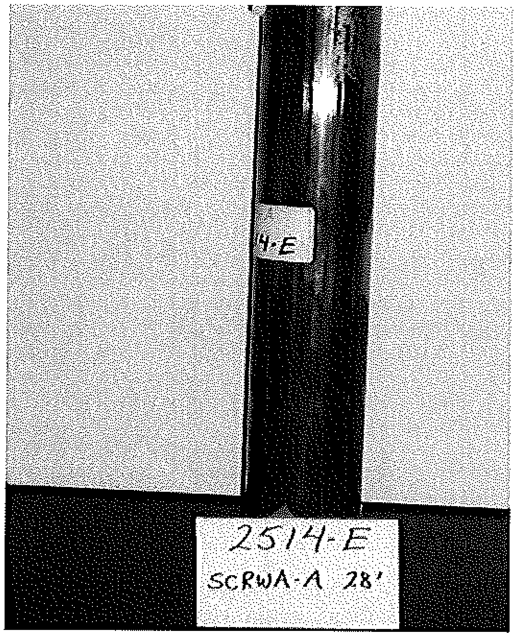
143E Spring Hill Dr., Grass Valley, CA, 530-272-2448

LABORATORY SERVICES

Initial Photos Prior to Remolding

Client: Locus Technologies	Project No: 81707.00	Lab Sample Number: **2514**
Project Name: Description: Soil Column Tests Job#27011 PO 30-1 Tube Samples		Report Date: July 31, 2008

2514-D, SJ/SC-D, depth 20-24'



2514-E, SCRWA-A, depth 28'

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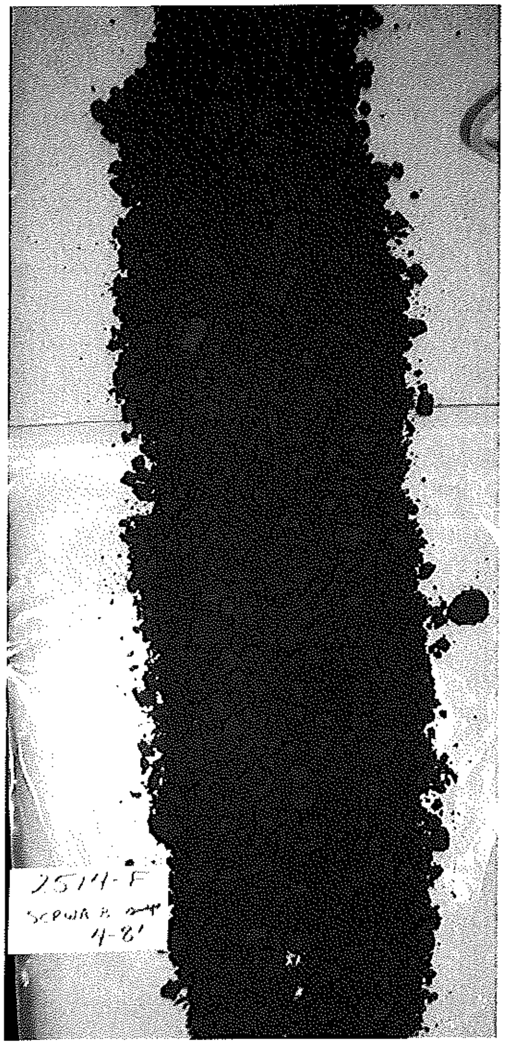
Initial Photos Prior to Remolding

143E Spring Hill Dr., Grass Valley, CA, 530-272-2448

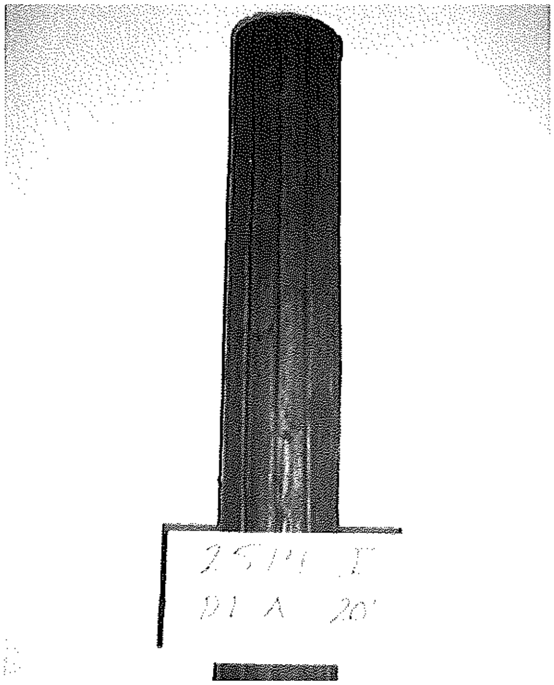
LABORATORY SERVICES

Client: Locus Technologies		*Project No:* 81707.00	*Lab Sample Number:* **2514**
Project Name: Soil Column Tests Job#27011 PO 30-1 Tube Samples	*Description:*		*Report Date:* July 31, 2008



2514-F, SCRWA-F, depth 4-8'

2514-H, SCRWA-D, depth 0-4'



2514-I, DI-A, depth 20'

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Print Date: 08/06/08 *Entered By:* SLS *Reviewed By:* SS *LSN:* **2514**

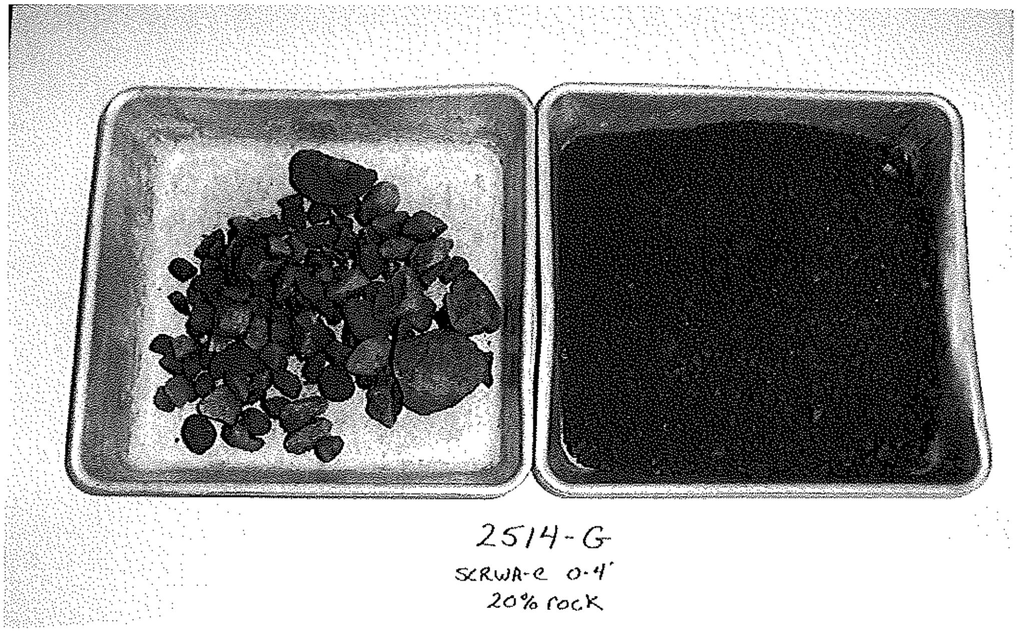
Vector Engineering, Inc.

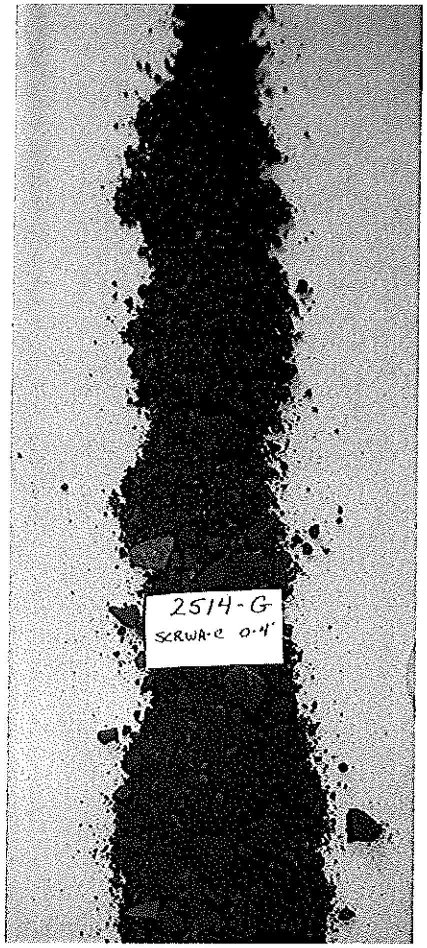
143E Spring Hill Dr., Grass Valley, CA, 530-272-2448

LABORATORY SERVICES

Initial Photos Prior to Remolding

Client: Locus Technologies	Project No: 81707.00	Lab Sample Number: **2514**
Project Name: Soil Column Tests Job#27011 PO 30-1 Tube Samples	Description:	Report Date: July 31, 2008





2514-G, SCRWA-C, depth 0-4'
sample contained 21.0% rock
>3/8" diameter

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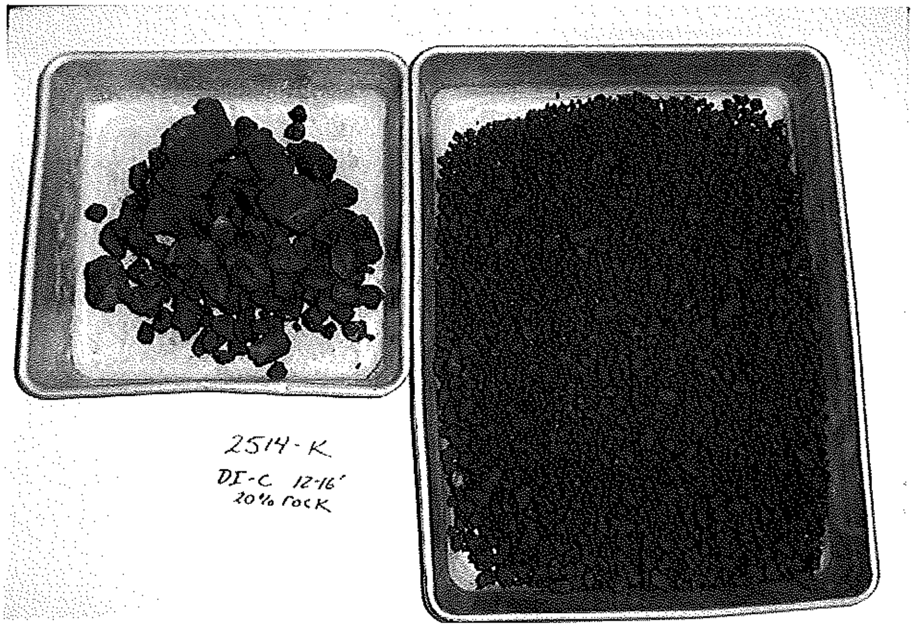
L:Labexcel \ Projects \ 1981 \ 81707 \ 2514-DCN.xls — Print Date: 08/06/08 — Entered By: SLS — Reviewed By: SS — LSN: **2514**

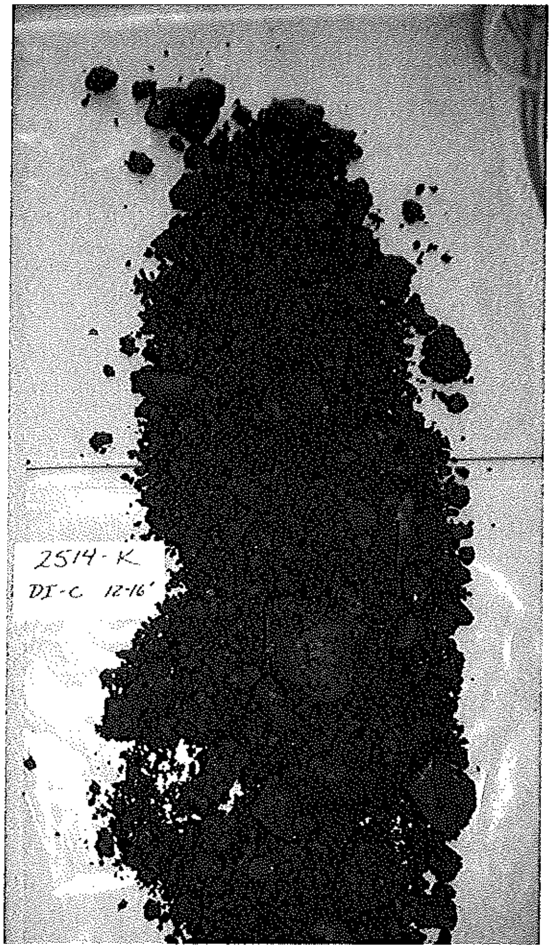
Vector Engineering, Inc.

143E Spring Hill Dr., Grass Valley, CA, 530-272-2448
LABORATORY SERVICES

Initial Photos Prior to Remolding

Client: Locus Technologies	Project No: 81707.00	Lab Sample Number: **2514**
Project Name: Description: Soil Column Tests Job#27011 PO 30-1 Tube Samples		Report Date: July 31, 2008





2514-K, DI-C, depth 12-16'
sample contained 21.9% rock
>3/8" diameter

These results apply only to the above listed samples. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc.
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L:Labexcel \ Projects \ 1981 \ 81707 \ 2514-DCN.xls
Print Date: 08/06/08
Entered By: SLS
Reviewed By: SS
LSN: **2514**
DCN: DCN (rev. 01/31/01)

APPENDIX II-C

X-RAY DIFFRACTION REPORT

UNIVERSITY OF CALIFORNIA, DAVIS

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(530) 752-1406
FAX (530) 752-1552
HTTP://LAWR.UCDAVIS.EDU

ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616-8627

May 21, 2009

WES HAWTHORNE
Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043

Dear Wes:

Enclosed is a report with the results of the mineral analysis of the clay fractions for the 10 samples from Vector Engineering. Please let me know if you have questions about the results.

Sincerely,

Randy

Randal J. Southard
Professor of Soils
530-752-7041
rjsouthard@ucdavis.edu

Project name: Locus Technologies

X-ray diffraction methods for 10 soil samples received from Vector Engineering, Inc.

Basics of X-ray diffraction

Samples are irradiated with X-rays of a single wavelength, in this case, Cu Kα radiation. The X-rays cause atoms in the sample to vibrate and re-emit the X-rays, that is, they "scatter" the incident X-rays in all directions. If the atoms are arranged in a regular, periodic pattern (that is, if the sample is crystalline), at certain angles of scatter, the scattered X-rays are in phase and the amplitudes of the scattered X-ray waves add and the scattering produces diffraction. From the diffraction angle, the inter-atomic spacing of the planes of atoms causing the constructive interference during scattering can be calculated from Bragg's Law, $n\lambda = 2d\sin\Theta$, where n is an integer that specifies the "order" of diffraction, λ is the wavelength of the Cu Kα radiation, d is the inter-atomic spacing of the diffracting plane of atoms, and Θ is the diffraction angle. The d-spacings are compared to data libraries of the d-spacings of known minerals. Generally speaking, X-ray diffraction is qualitative. At best, it is semi-quantitative, based on peak intensity. Limitations to quantitative interpretation of diffraction patterns are caused by particle-size distribution within the sample, particle orientation, crystallinity (how regular the atomic pattern) is, and small variations in mineral composition, which is particularly common in the layer silicate clays (e.g., smectite, chlorite, and vermiculite). All of these factors can influence peak intensity. For this reason, precise estimates of clay mineral percentages are not possible, and relative abundance of mineral phases is about as quantitative as we can get.

Preparation of clay fractions

Sub-samples weighing about 15 g were taken from each of the ten < 2-mm sieved soil samples and put into separate 250-mL plastic shaker bottles. The bottles were then filled with approximately 0.001 M Na_2CO_3 solution to a 10-cm height, capped, shaken overnight to disperse the sample, and centrifuged at 750 rpm for 3.0 min. The clays in suspension were decanted into plastic cups and stored for X-ray diffraction analysis. The dispersion, centrifugation, and decanting procedures were repeated three more times on each 15 g sub-sample to separate all of the clays from the silt and sand fractions.

Sample cation saturation pretreatment and glass slide mounting

Clay slides for each of the ten soils were made by placing 6 to 10 drops of the stored clay suspensions onto Nuclepore Track-Etch membranes (Whatman, Inc., Piscataway, NJ) mounted on a fritted glass filtration apparatus. The clays were washed with 1 M $MgCl_2$, 1 M KCl, or 1 M $MgCl_2$ plus glycerol, rinsed with deionized water, and transferred from the membranes to glass petrographic microscope slides. The various cation treatments cause layer silicate interlayer d-spacings to change, allowing identification of the array of mineral phases present. X-ray analyses were made using a Rigaku Ultima IV X-ray diffractometer (Rigaku Corp., Tokyo, Japan) fitted with a curved graphite monochromator to produce Cu Kα radiation. After the initial diffraction analysis, the KCl samples were reanalyzed after a 1-hr 550 °C heat treatment.

References

Soil Survey Staff. 2004. Soil survey laboratory methods manual. Soil Surv. Invest. Rep. 42. Version 4.0. Available at soils.usda.gov/technical/lmm/ (verified 29 Apr. 2009). Natl. Soil Survey Ctr., Lincoln, NE.

Whittig, L.D., and W.R. Allardice. 1986. X-ray diffraction techniques. p. 331–362. In A. Klute (ed.) Methods of soil analysis. Part 1. Physical and mineralogical methods. 2nd ed. Agron. Monogr. 9. ASA and SSSA, Madison, WI.

Locus Technologies Clay Mineralogy Analysis

Sample Identification	UC Davis sample ID	Mineralogy*
SJ/SC-A 24’	SCA	K, V, S, M, HIM (m), Q (tr)
SJ/SC-B 0-4’	SCB	K, M, V, S (m), Q (m)
SJ/SC-D 20-24’	SCD	K, S, C, M, V (m), HIM (m), Q (m)
SCRWA-A 28’	SCE	S, K, V (m), Q (tr), M (tr)
SCRWA-B 4-8’	SCF	S, K, M, V, HIM (tr), Q (tr)
SCRWA-C 0-4’	SCG	S, C, K, M (m), HIM (m), Q (m), F(m)
SCRWA-D 0-4’	SCH	S, K, M (m), V (m), Q (tr)
DI-A 20’	SCI	C, K, S (m), V (m), HIM (m), Q (tr)
DI-B 20-24’	SCJ	S, V, M (tr)
DI-C 12-16’	SCK	M, K, S (m), Q (m), C (tr), F (tr)

* KEY TO MINERALS (In the table, listed in the order of decreasing apparent abundance)
C = CHLORITE
F = FELDSPAR
HIM = HYDROXY-INTERLAYERED 2:1 MINERAL
K = KAOLINITE
M = MICA
Q = QUARTZ
S= SMECTITE
V = VERMICULITE
(m) = minor, probably 5-10% of the sample
(tr) = trace, probably < 5% of the sample

Peak Search

Sample :
Comment :
method : 2nd differential

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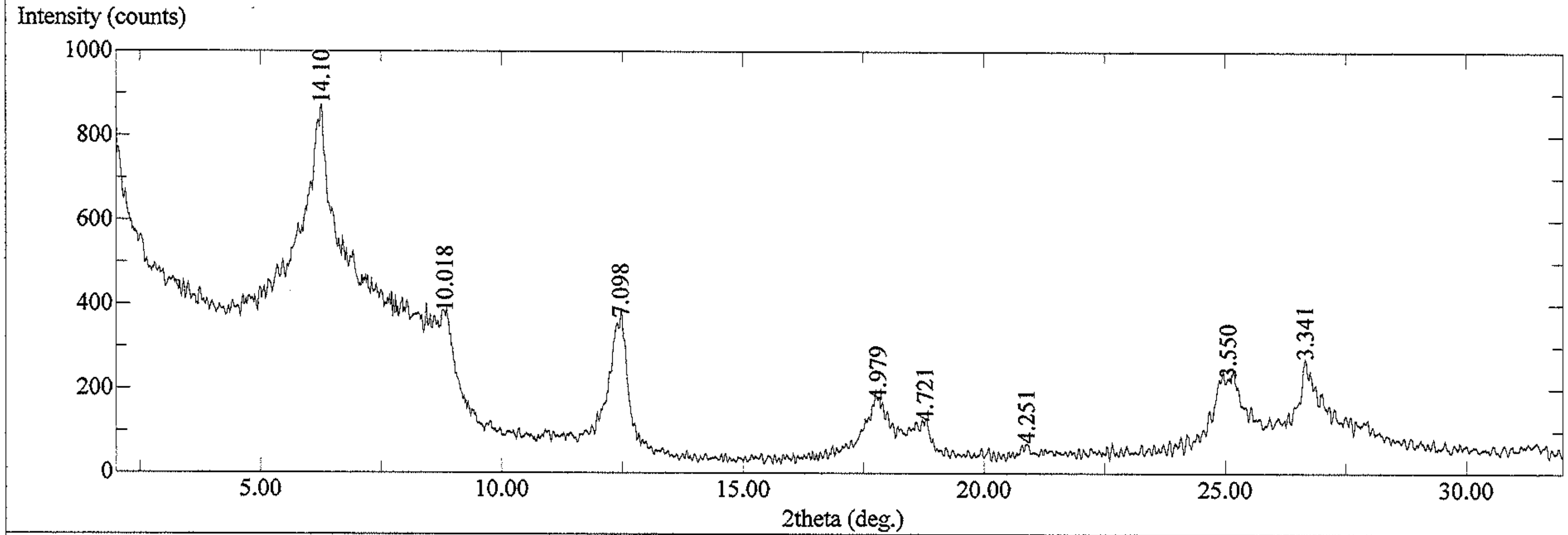
Memo :
Typical width : 0.000 deg.

Date : April-02-09 12:35:29

Min. height : 0.00 counts

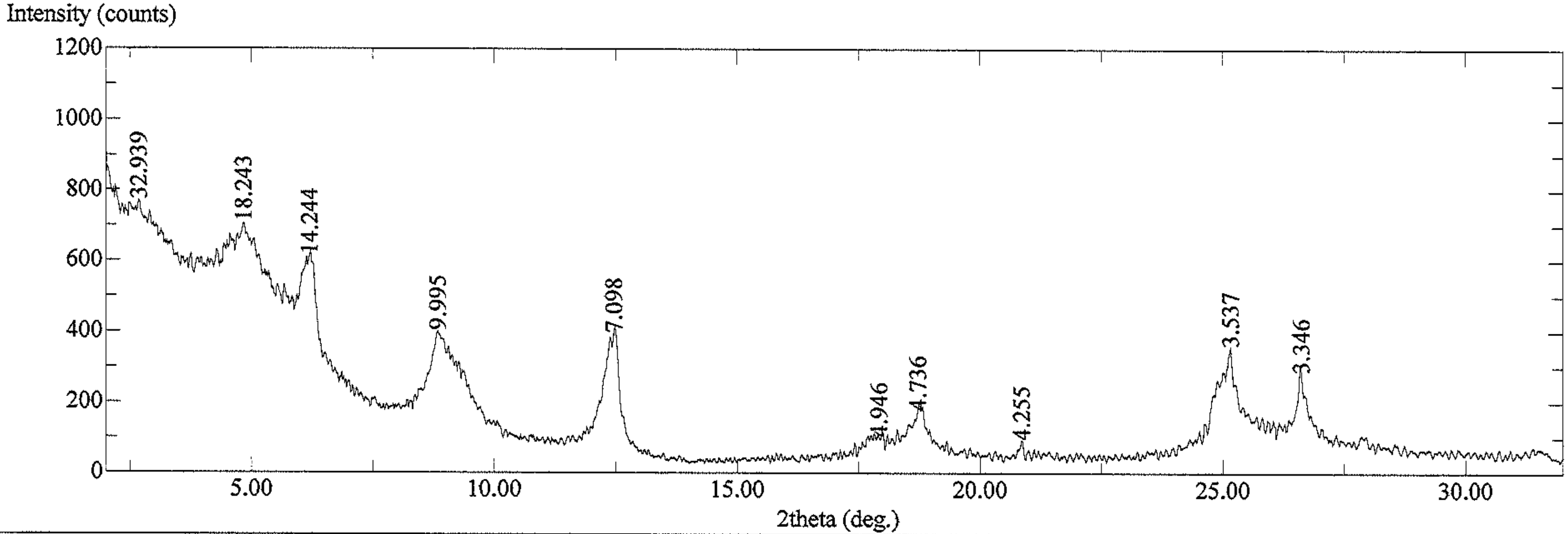
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.260	*****	14.1073	873	100						
2	8.820	*****	10.0176	380	44						
3	12.460	*****	7.0981	368	43						
4	17.800	*****	4.9789	173	20						
5	18.780	*****	4.7212	124	15						
6	20.880	*****	4.2509	72	9						
7	25.060	*****	3.5505	227	26						
8	26.660	*****	3.3409	272	32						

Peak Search

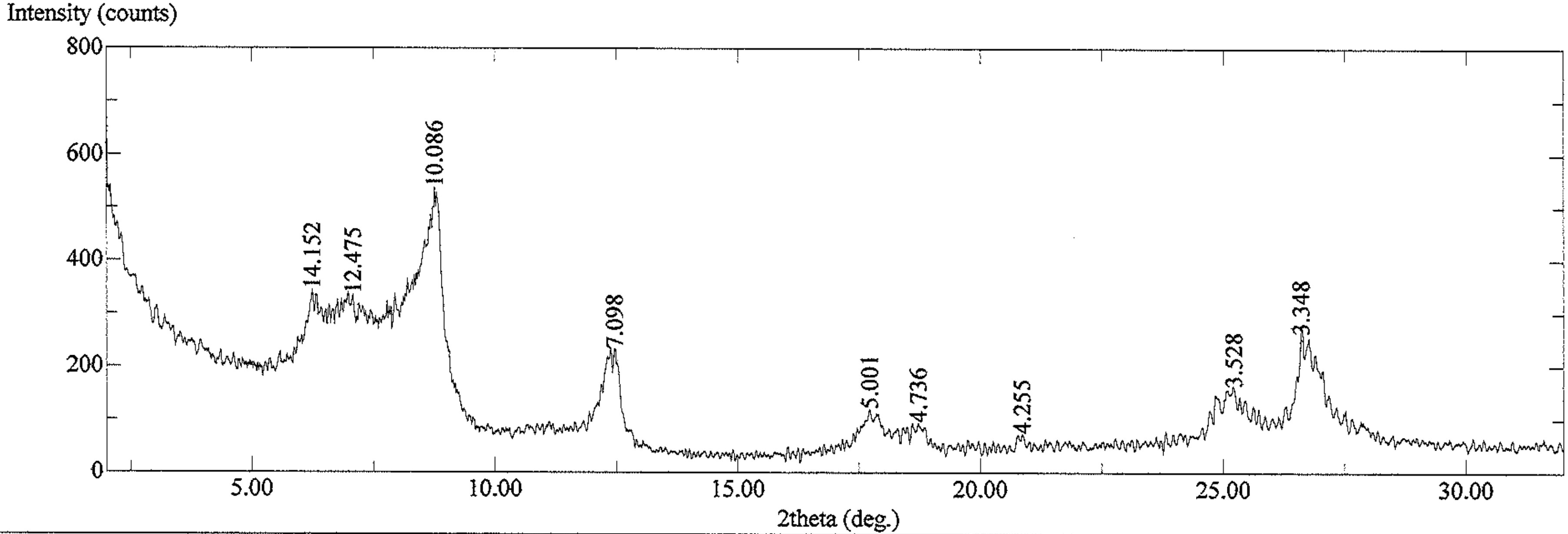
Sample :
Comment :
method : 2nd differential
File : SCAMGGPeak.pek
Memo :
Typical width : 0.000 deg.
Date : April-07-09 13:28:58
Operator : Administrator
Min. height : 0.00 counts



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	2.680	*****	32.9387	772	100						
2	4.840	*****	18.2426	707	92						
3	6.200	*****	14.2437	613	80						
4	8.840	*****	9.9949	402	53						
5	12.460	*****	7.0981	396	52						
6	17.920	*****	4.9458	103	14						
7	18.720	*****	4.7362	178	24						
8	20.860	*****	4.2549	94	13						
9	25.160	*****	3.5366	360	47						
10	26.620	*****	3.3459	286	38						

Peak Search

Sample :
Comment :
method : 2nd differential
File : SCAKPeak.pek
Memo :
Typical width : 0.000 deg.
Date : April-02-09 12:56:00
Operator : Administrator
Min. height : 0.00 counts

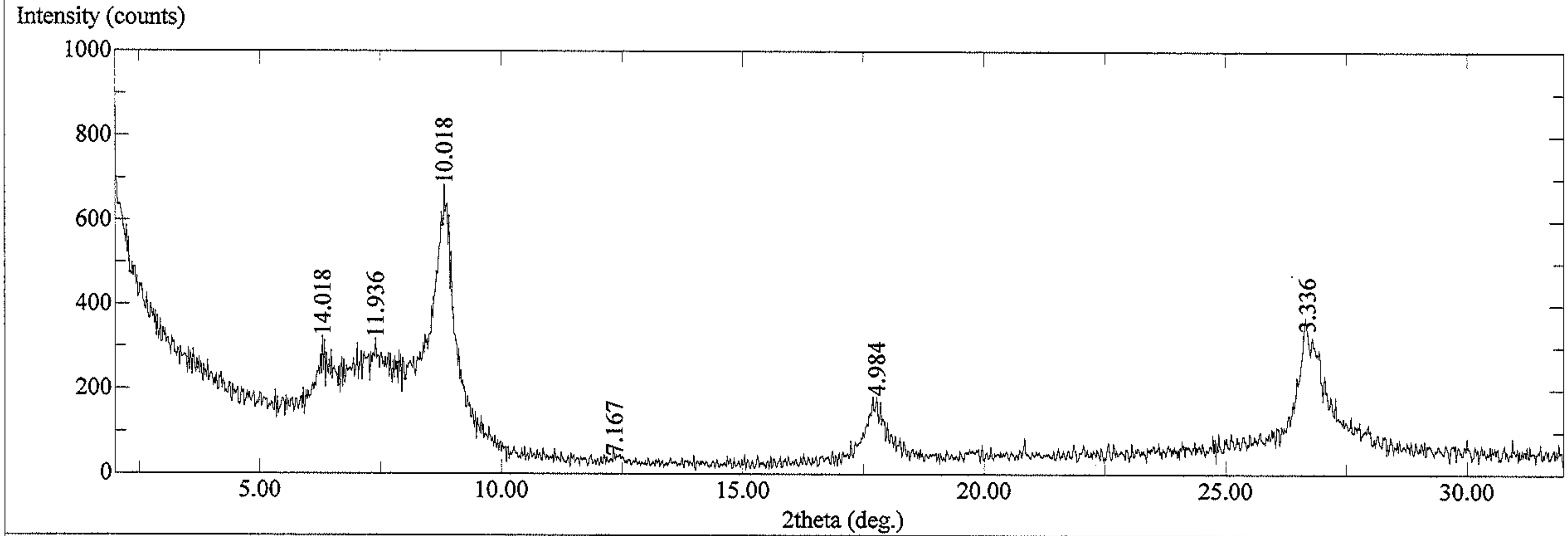


Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.240	*****	14.1525	343	65
2	7.080	*****	12.4751	334	63
3	8.760	*****	10.0860	536	100
4	12.460	*****	7.0981	232	44
5	17.720	*****	5.0012	120	23
6	18.720	*****	4.7362	95	18
7	20.860	*****	4.2549	74	14
8	25.220	*****	3.5283	162	31
9	26.600	*****	3.3483	262	49

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

Peak Search

Sample :
Comment :
method : 2nd differential
File : SCAK550Peak.pek
Memo :
Typical width : 0.000 deg.
Date : April-13-09 10:09:35
Min. height : 0.00 counts
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.300	*****	14.0178	324	48						
2	7.400	*****	11.9364	319	47						
3	8.820	*****	10.0176	685	100						
4	12.340	*****	7.1668	42	7						
5	17.780	*****	4.9844	184	27						
6	26.700	*****	3.3360	338	50						

Peak Search

Sample :
Comment :
method : 2nd differential
File : SCBMg.raw
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Typical width : 0.000 deg.
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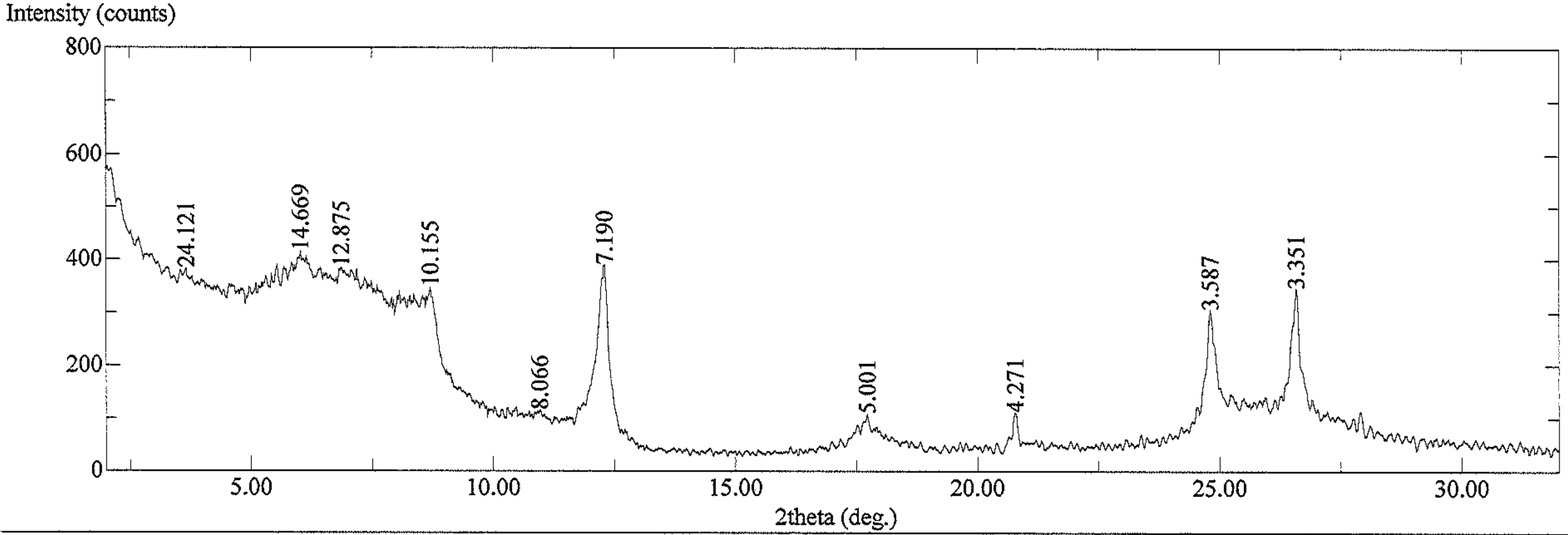
Min. height : 0.00 counts
Operator : Administrator

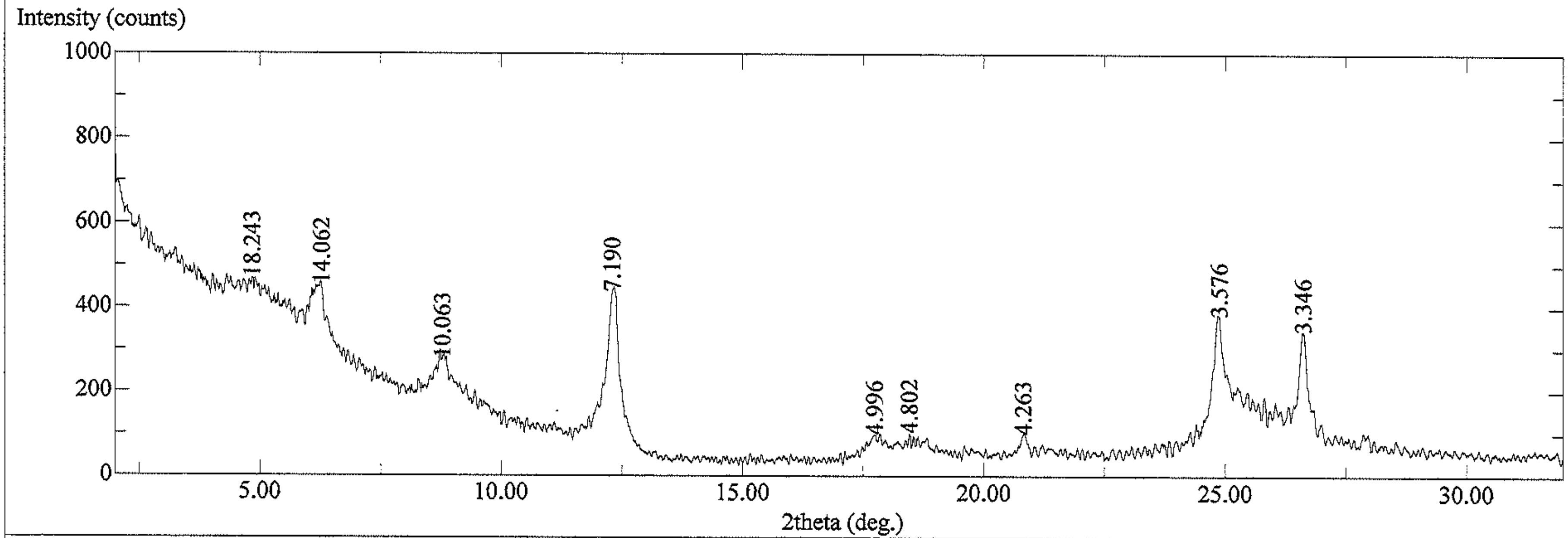


Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	3.660	*****	24.1210	383	93						
2	6.020	*****	14.6692	415	100						
3	6.860	*****	12.8747	384	93						
4	8.700	*****	10.1555	347	84						
5	10.960	*****	8.0659	115	28						
6	12.300	*****	7.1900	390	94						
7	17.720	*****	5.0012	108	27						
8	20.780	*****	4.2711	112	27						
9	24.800	*****	3.5871	306	74						
10	26.580	*****	3.3508	347	84						

Peak Search

Sample :
Comment :
method : 2nd differential

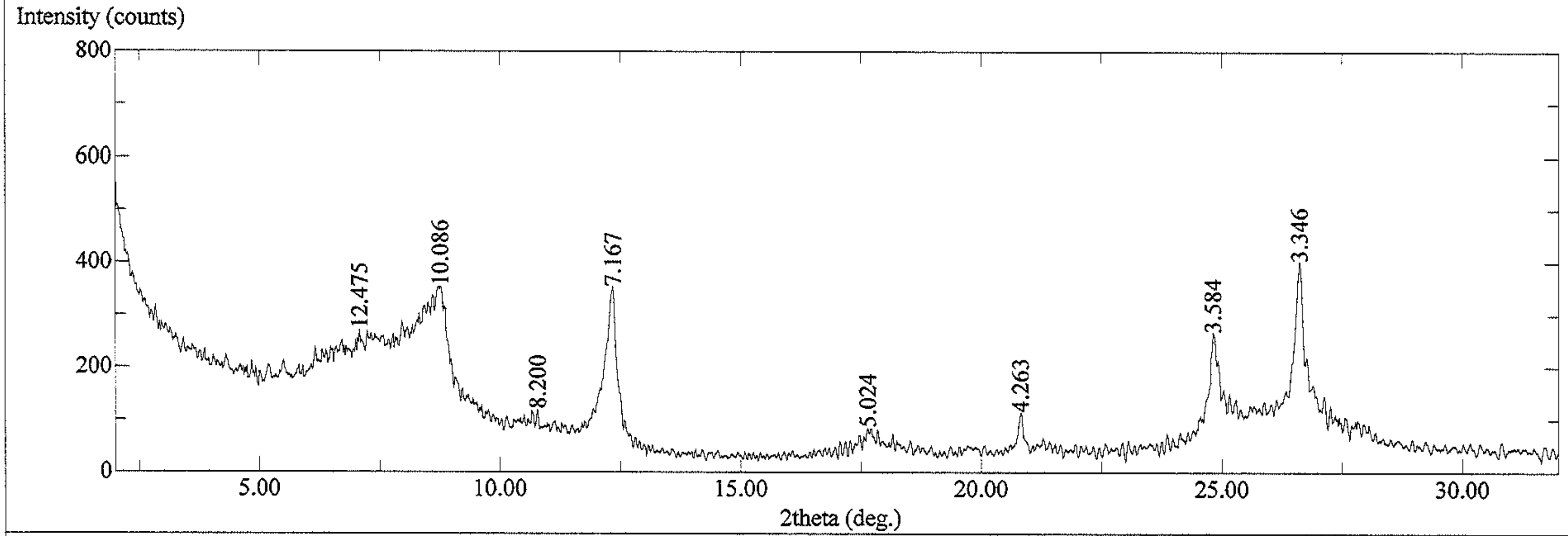
File : SCBMGGPeak.pek Date : April-07-09 16:04:29 Operator : Administrator
Memo :
Typical width : 0.000 deg. Min. height : 0.00 counts



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	4.840	*****	18.2426	468	100						
2	6.280	*****	14.0624	452	97						
3	8.780	*****	10.0631	276	59						
4	12.300	*****	7.1900	437	94						
5	17.740	*****	4.9956	98	21						
6	18.460	*****	4.8023	102	22						
7	20.820	*****	4.2630	98	22						
8	24.880	*****	3.5758	381	82						
9	26.620	*****	3.3459	344	74						

Peak Search

Sample :
File : SCBK.raw
Date : April-07-09 13:51:51
Operator : Administrator
Comment :
Memo :
method : 2nd differential
Typical width : 0.000 deg.
Min. height : 0.00 counts

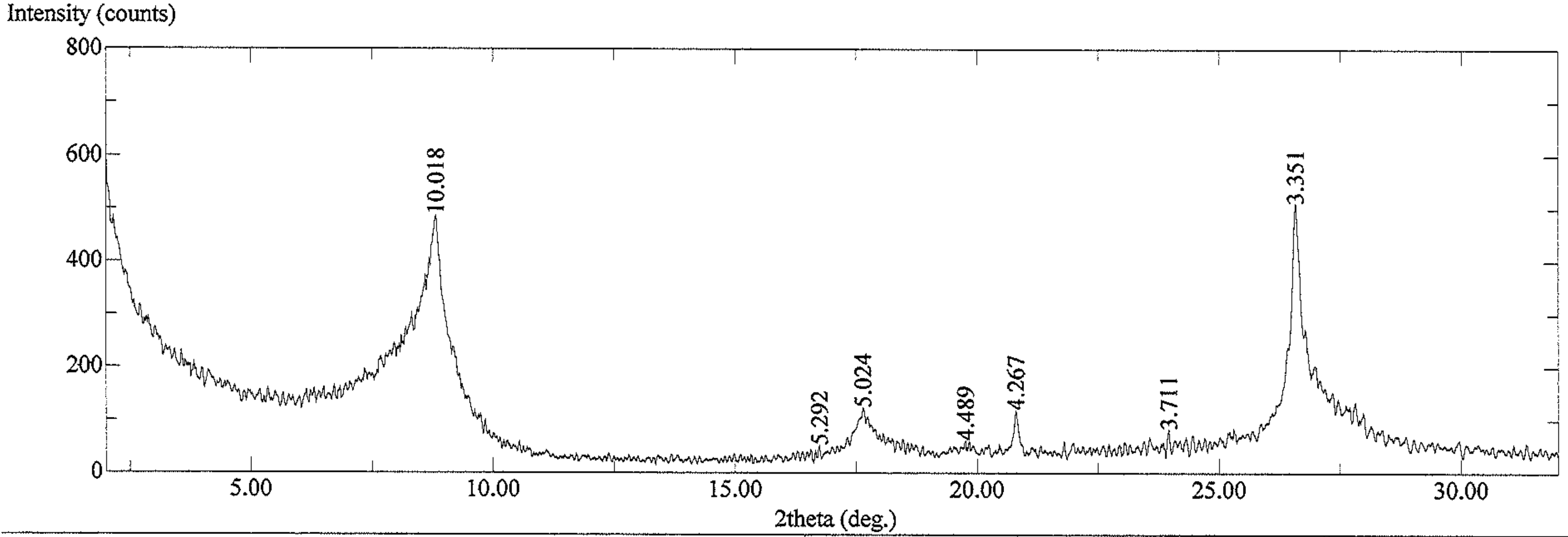


Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	7.080	*****	12.4751	272	68
2	8.760	*****	10.0860	353	88
3	10.780	*****	8.2002	119	30
4	12.340	*****	7.1668	353	88
5	17.640	*****	5.0237	85	22
6	20.820	*****	4.2630	115	29
7	24.820	*****	3.5843	267	67
8	26.620	*****	3.3459	403	100

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

Peak Search

Sample :
Comment :
method : 2nd differential
File : SCBK550.raw
Memo :
Typical width : 0.000 deg.
Date : April-13-09 08:47:55
Min. height : 0.00 counts
Operator : Administrator

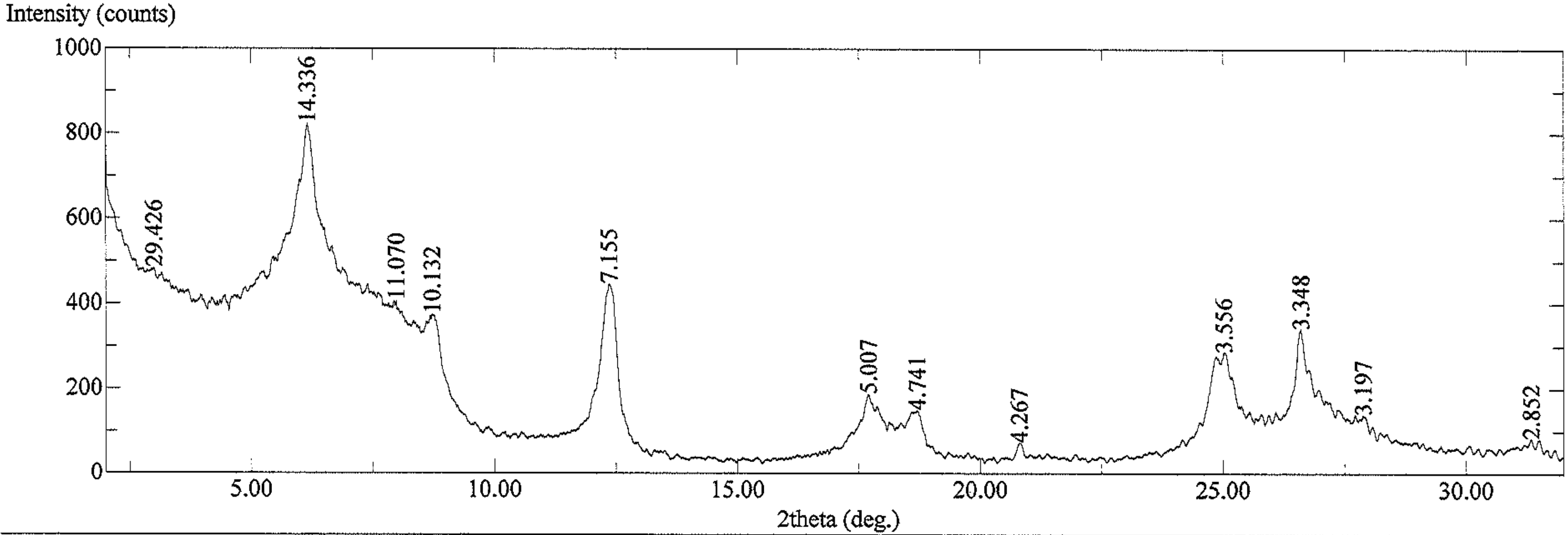


Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	8.820	*****	10.0176	487	96
2	16.740	*****	5.2917	51	11
3	17.640	*****	5.0237	123	25
4	19.760	*****	4.4892	62	13
5	20.800	*****	4.2670	119	24
6	23.960	*****	3.7109	83	17
7	26.580	*****	3.3508	510	100

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

Peak Search

Sample	:	File	: SCDMg.raw	Date	: April-07-09 16:25:52	Operator	: Administrator
Comment	:	Memo	:				
method	: 2nd differential	Typical width	: 0.000 deg.	Min. height	: 0.00 counts		



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	3.000	*****	29.4259	484	59
2	6.160	*****	14.3361	822	100
3	7.980	*****	11.0701	406	50
4	8.720	*****	10.1322	375	46
5	12.360	*****	7.1553	447	55
6	17.700	*****	5.0068	188	23
7	18.700	*****	4.7412	150	19
8	20.800	*****	4.2670	73	9
9	25.020	*****	3.5561	287	35
10	26.600	*****	3.3483	342	42
11	27.880	*****	3.1974	140	18
12	31.340	*****	2.8519	84	11

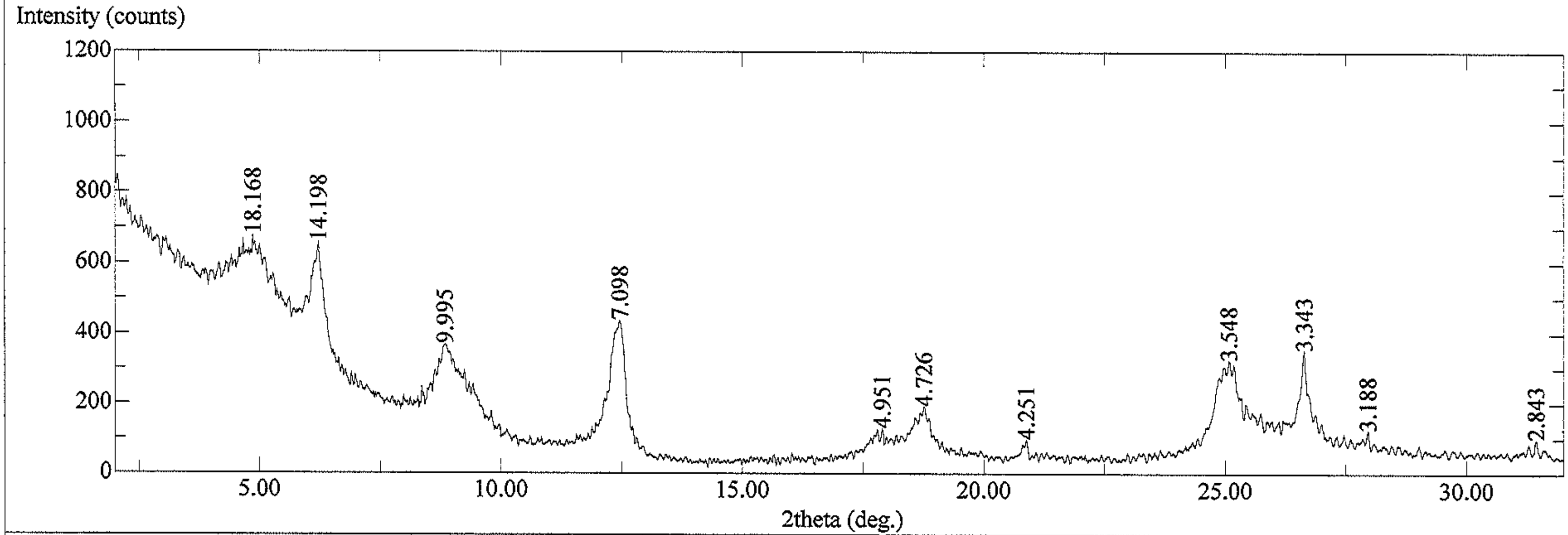
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCDMGG.raw
Memo :
Typical width : 0.000 deg.

Date : April-07-09 16:58:43
Min. height : 0.00 counts

Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	4.860	*****	18.1675	677	100
2	6.220	*****	14.1979	657	97
3	8.840	*****	9.9949	369	55
4	12.460	*****	7.0981	438	65
5	17.900	*****	4.9513	129	20
6	18.760	*****	4.7262	192	29
7	20.880	*****	4.2509	98	15
8	25.080	*****	3.5477	325	49
9	26.640	*****	3.3434	353	53
10	27.960	*****	3.1885	124	19
11	31.440	*****	2.8430	101	15

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

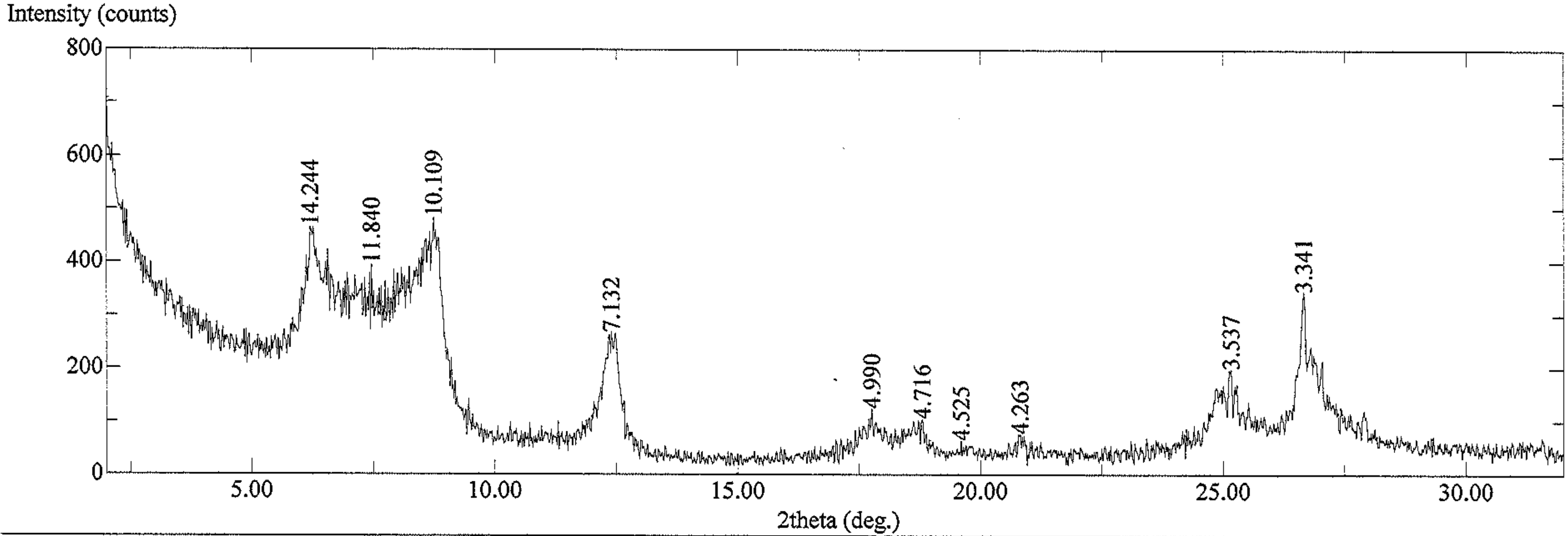
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCDK.raw
Memo :
Typical width : 0.000 deg.

Date : April-07-09 14:14:51
Min. height : 0.00 counts

Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.200	*****	14.2437	465	97
2	7.460	*****	11.8405	394	82
3	8.740	*****	10.1091	483	100
4	12.400	*****	7.1323	267	56
5	17.760	*****	4.9900	125	26
6	18.800	*****	4.7162	105	22
7	19.600	*****	4.5255	64	14
8	20.820	*****	4.2630	77	16
9	25.160	*****	3.5366	199	42
10	26.660	*****	3.3409	344	72

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

Peak Search

Sample :
Comment :
method : 2nd differential
File : SCDK550.raw
Memo :
Typical width : 0.000 deg.
Date : April-13-09 10:27:58
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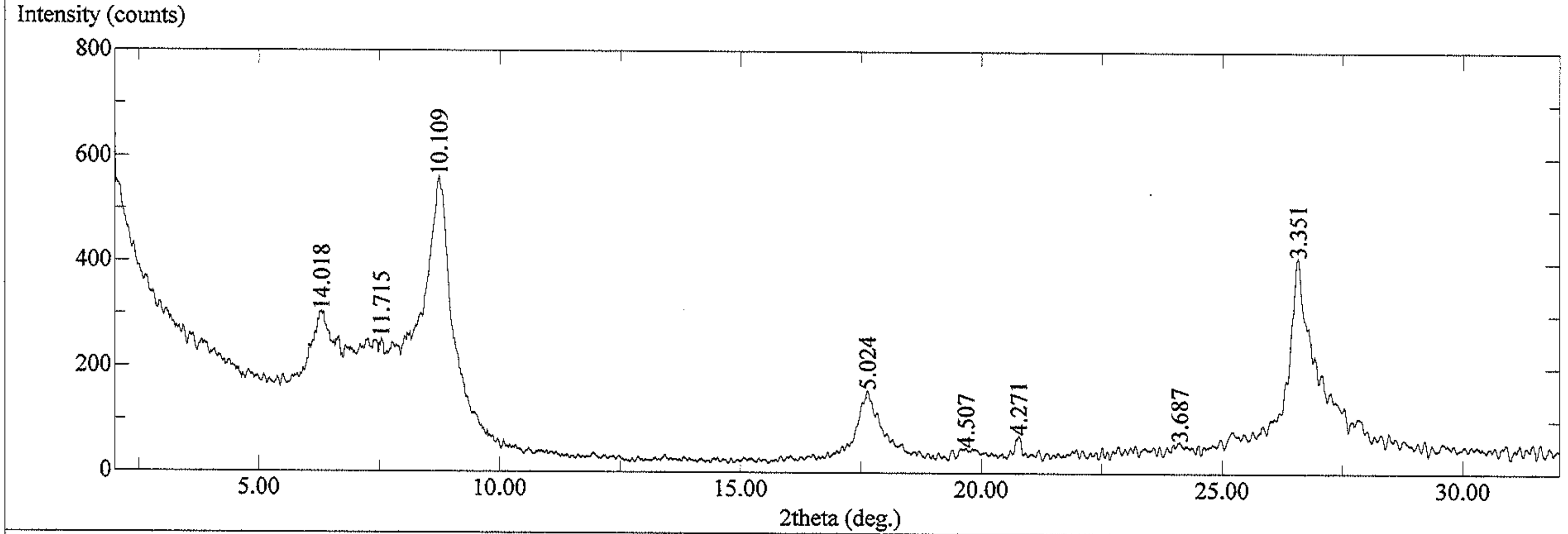
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.300	*****	14.0178	304	55
2	7.540	*****	11.7150	253	46
3	8.740	*****	10.1091	561	100
4	17.640	*****	5.0237	157	29
5	19.680	*****	4.5073	48	9
6	20.780	*****	4.2711	72	13
7	24.120	*****	3.6867	61	11
8	26.580	*****	3.3508	411	74

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

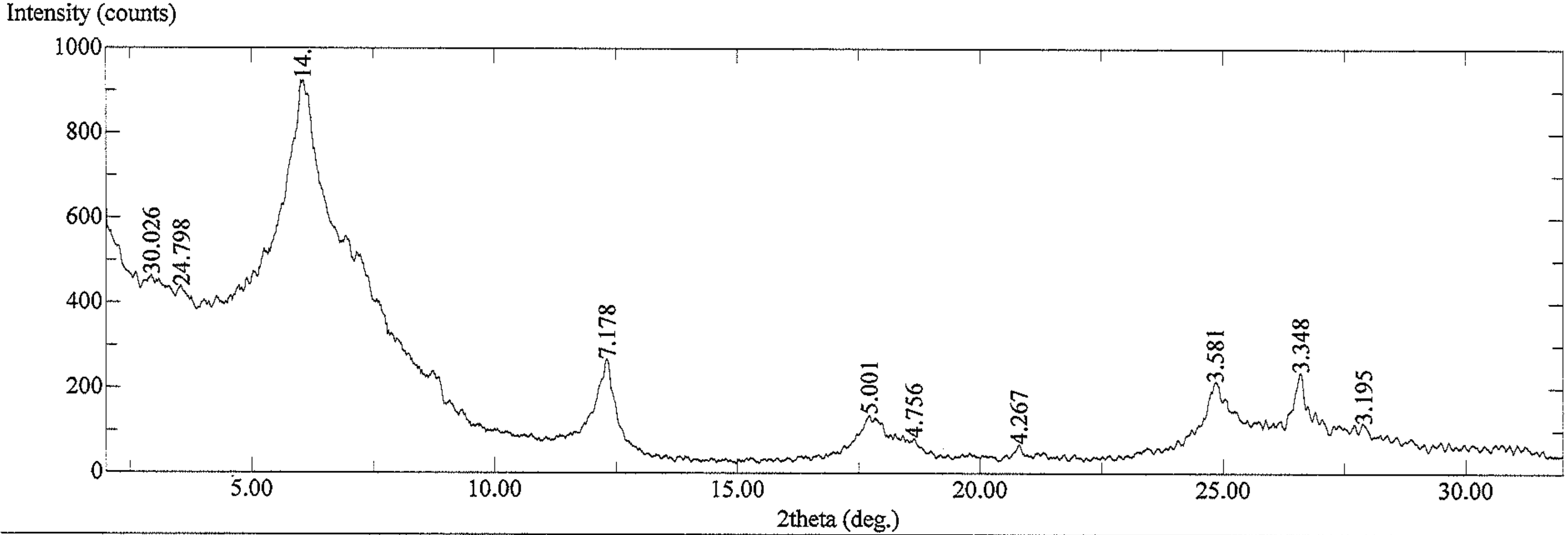
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCEMg.raw
Memo :
Typical width : 0.000 deg.

Date : April-07-09 17:20:51
Min. height : 0.00 counts

Operator : Administrator

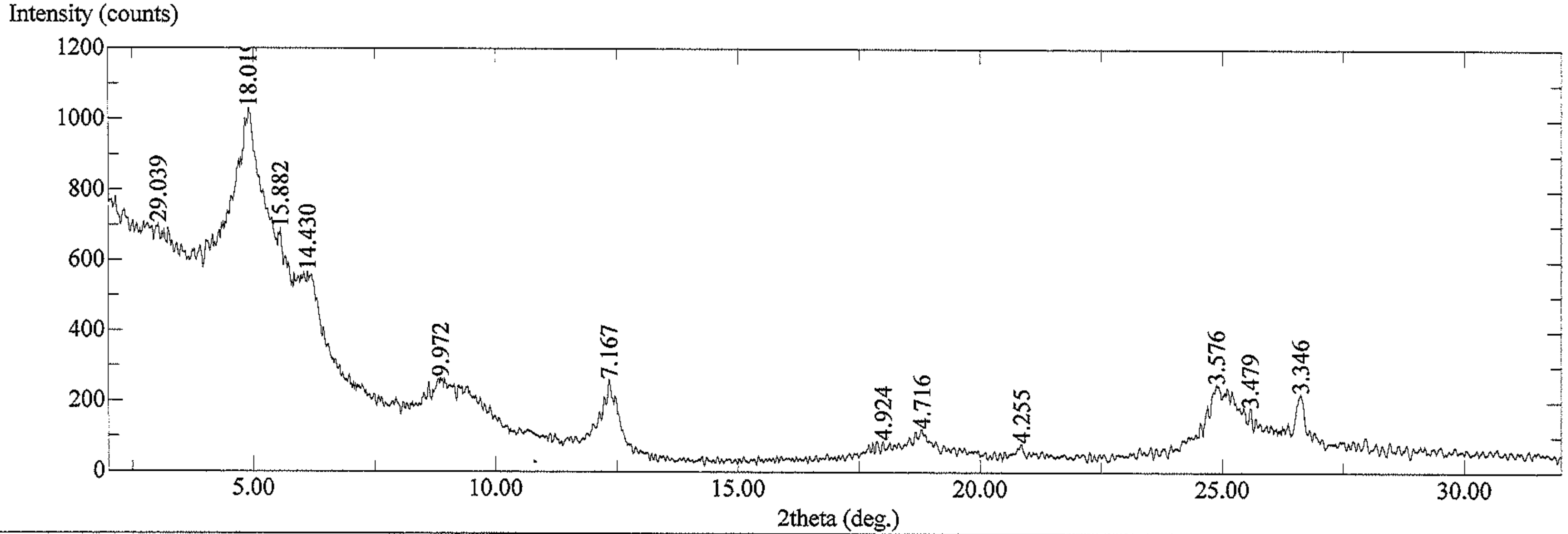


Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	2.940	*****	30.0263	465	51
2	3.560	*****	24.7983	437	48
3	6.060	*****	14.5724	926	100
4	12.320	*****	7.1784	267	29
5	17.720	*****	5.0012	138	15
6	18.640	*****	4.7563	83	9
7	20.800	*****	4.2670	69	8
8	24.840	*****	3.5814	216	24
9	26.600	*****	3.3483	239	26
10	27.900	*****	3.1952	118	13

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

Peak Search

Sample :
Comment :
method : 2nd differential
File : SCEMGG.raw
Memo :
Typical width : 0.000 deg.
Date : April-07-09 17:42:35
Min. height : 0.00 counts
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	3.040	*****	29.0388	705	69						
2	4.900	*****	18.0193	1030	100						
3	5.560	*****	15.8817	689	67						
4	6.120	*****	14.4297	568	56						
5	8.860	*****	9.9724	266	26						
6	12.340	*****	7.1668	262	26						
7	18.000	*****	4.9240	90	9						
8	18.800	*****	4.7162	122	12						
9	20.860	*****	4.2549	83	9						
10	24.880	*****	3.5758	252	25						
11	25.580	*****	3.4795	185	18						
12	26.620	*****	3.3459	225	22						

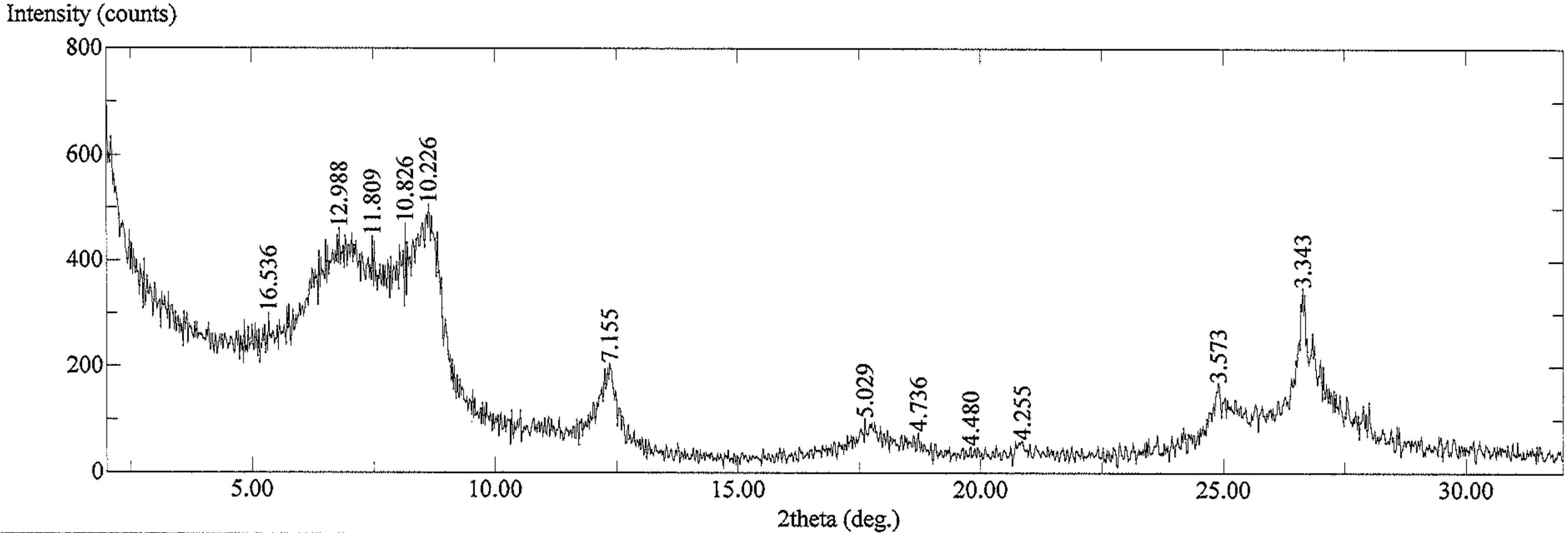
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCEK.raw
Memo :
Typical width : 0.000 deg.

Date : April-07-09 14:36:05
Min. height : 0.00 counts

Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	5.340	*****	16.5355	301	60						
2	6.800	*****	12.9882	462	92						
3	7.480	*****	11.8089	446	89						
4	8.160	*****	10.8263	471	94						
5	8.640	*****	10.2259	506	100						
6	12.360	*****	7.1553	206	41						
7	17.620	*****	5.0293	103	21						
8	18.720	*****	4.7362	78	16						
9	19.800	*****	4.4802	51	11						
10	20.860	*****	4.2549	62	13						
11	24.900	*****	3.5729	170	34						
12	26.640	*****	3.3434	350	70						

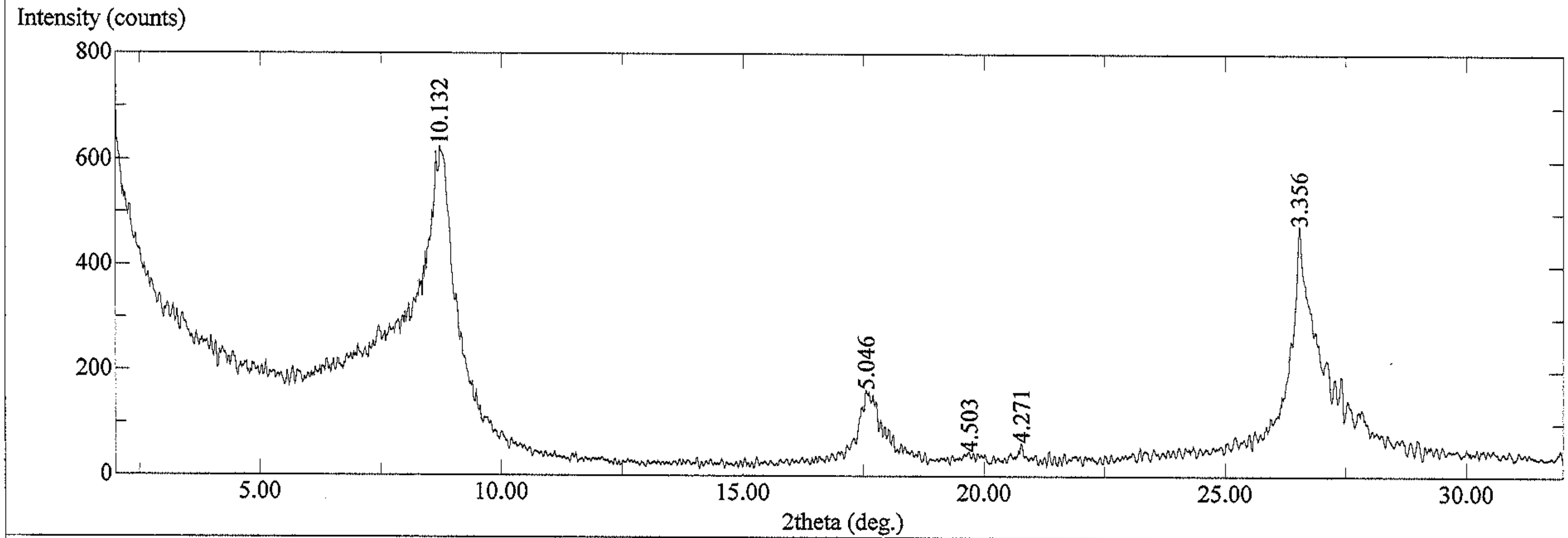
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCEK550.raw
Memo :
Typical width : 0.000 deg.

Date : April-13-09 11:06:45
Min. height : 0.00 counts

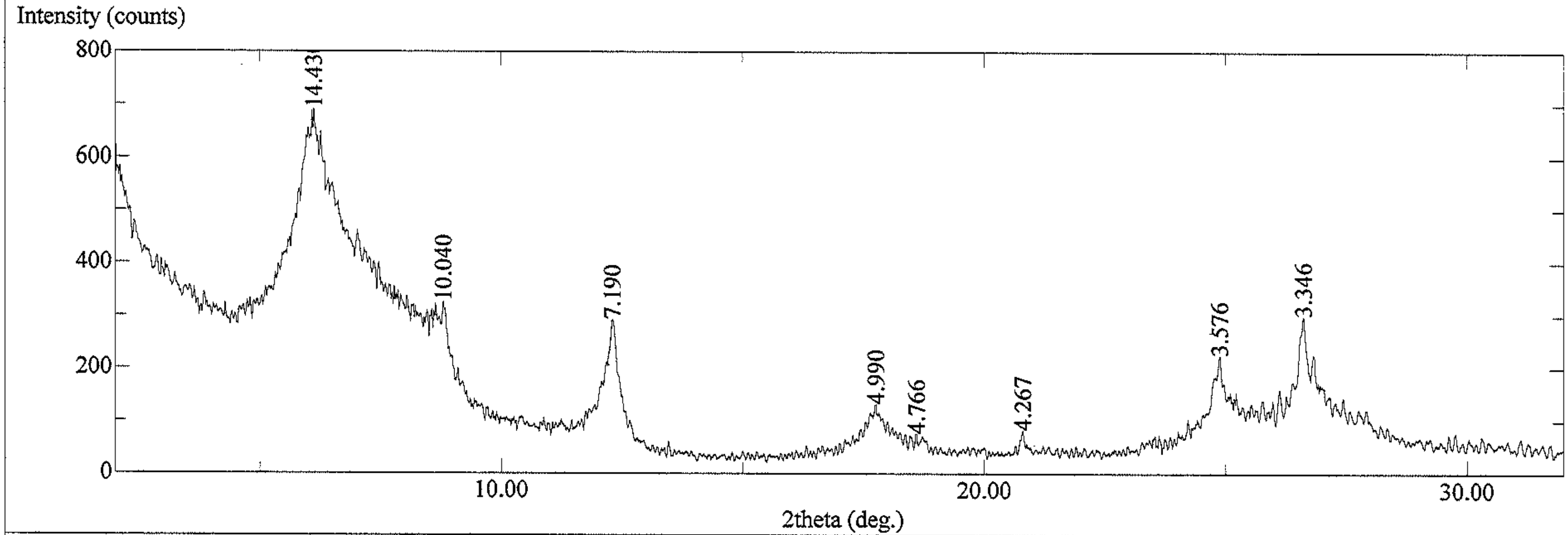
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	8.720	*****	10.1322	625	100						
2	17.560	*****	5.0464	164	27						
3	19.700	*****	4.5027	46	8						
4	20.780	*****	4.2711	64	11						
5	26.540	*****	3.3558	478	77						

Peak Search

Sample :
Comment :
method : 2nd differential
File : SCFMg.raw
Memo :
Typical width : 0.000 deg.
Date : April-08-09 13:48:12
Operator : Administrator
Min. height : 0.00 counts



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.120	*****	14.4297	690	100						
2	8.800	*****	10.0403	326	48						
3	12.300	*****	7.1900	292	43						
4	17.760	*****	4.9900	132	20						
5	18.600	*****	4.7665	76	12						
6	20.800	*****	4.2670	83	12						
7	24.880	*****	3.5758	225	33						
8	26.620	*****	3.3459	300	44						

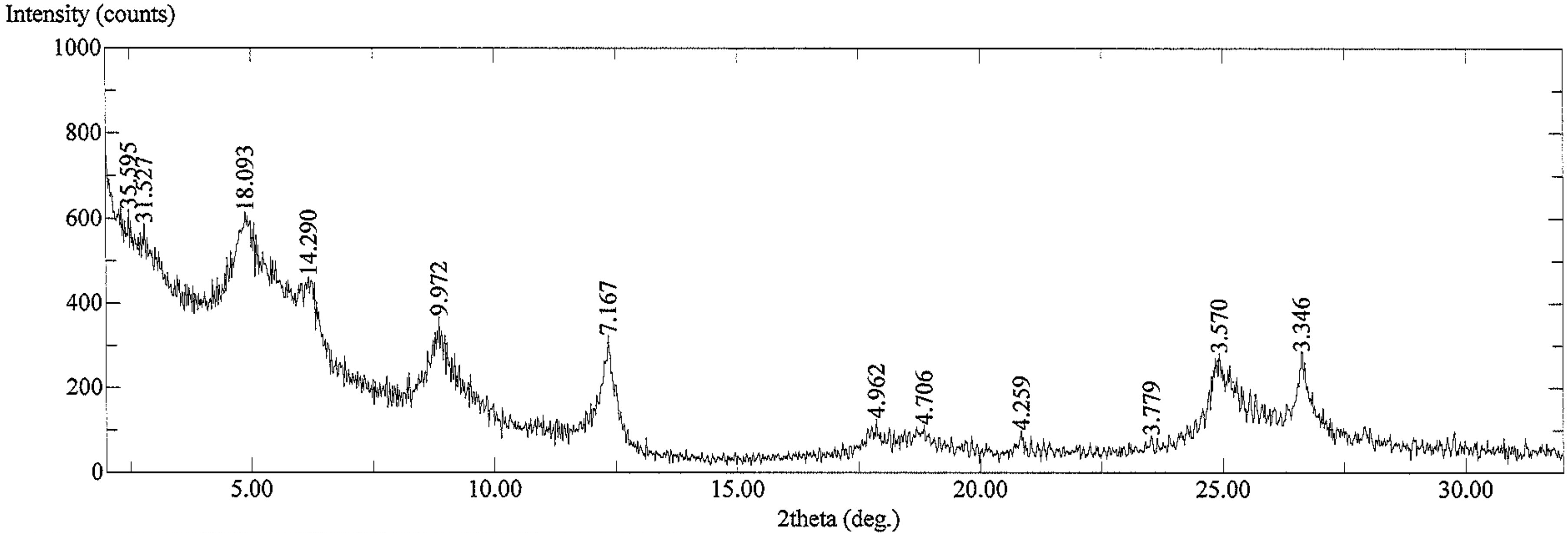
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCFMGG.raw
Memo :
Typical width : 0.000 deg.

Date : April-08-09 14:07:07
Min. height : 0.00 counts

Operator : Administrator

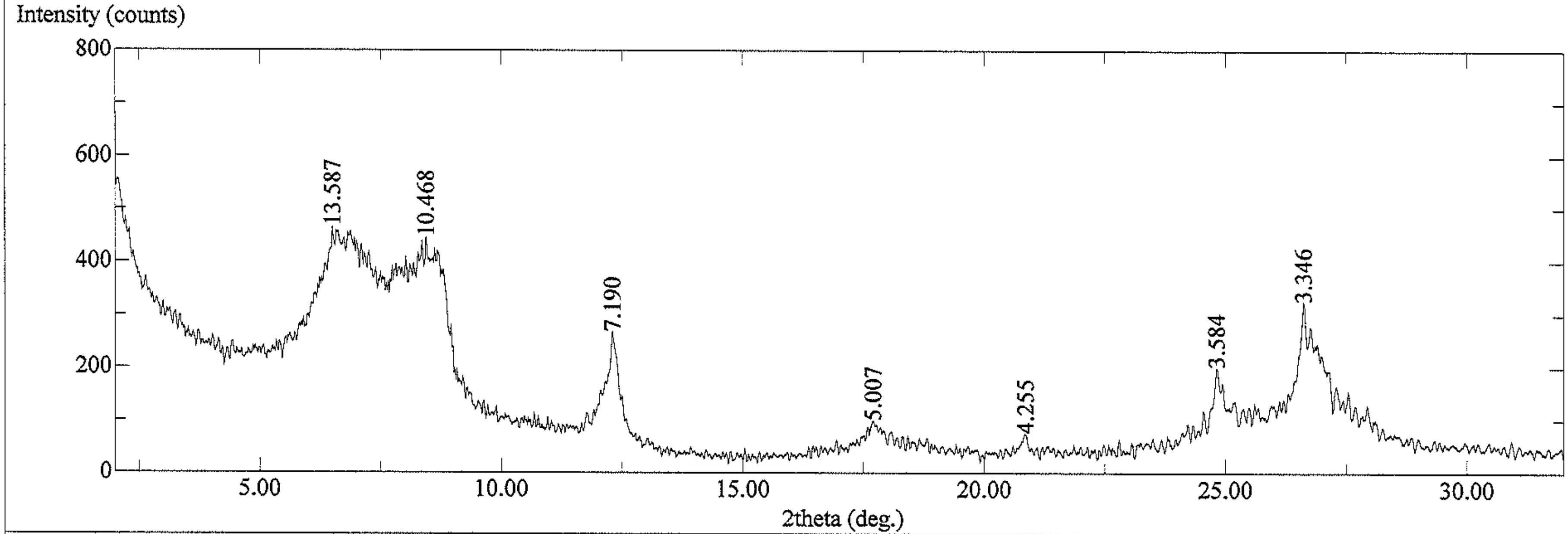


Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	2.480	*****	35.5946	621	100
2	2.800	*****	31.5273	588	95
3	4.880	*****	18.0931	615	100
4	6.180	*****	14.2897	463	75
5	8.860	*****	9.9724	369	60
6	12.340	*****	7.1668	324	53
7	17.860	*****	4.9623	127	21
8	18.840	*****	4.7063	112	18
9	20.840	*****	4.2589	100	17
10	23.520	*****	3.7794	88	15
11	24.920	*****	3.5701	282	46
12	26.620	*****	3.3459	286	47

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

Peak Search

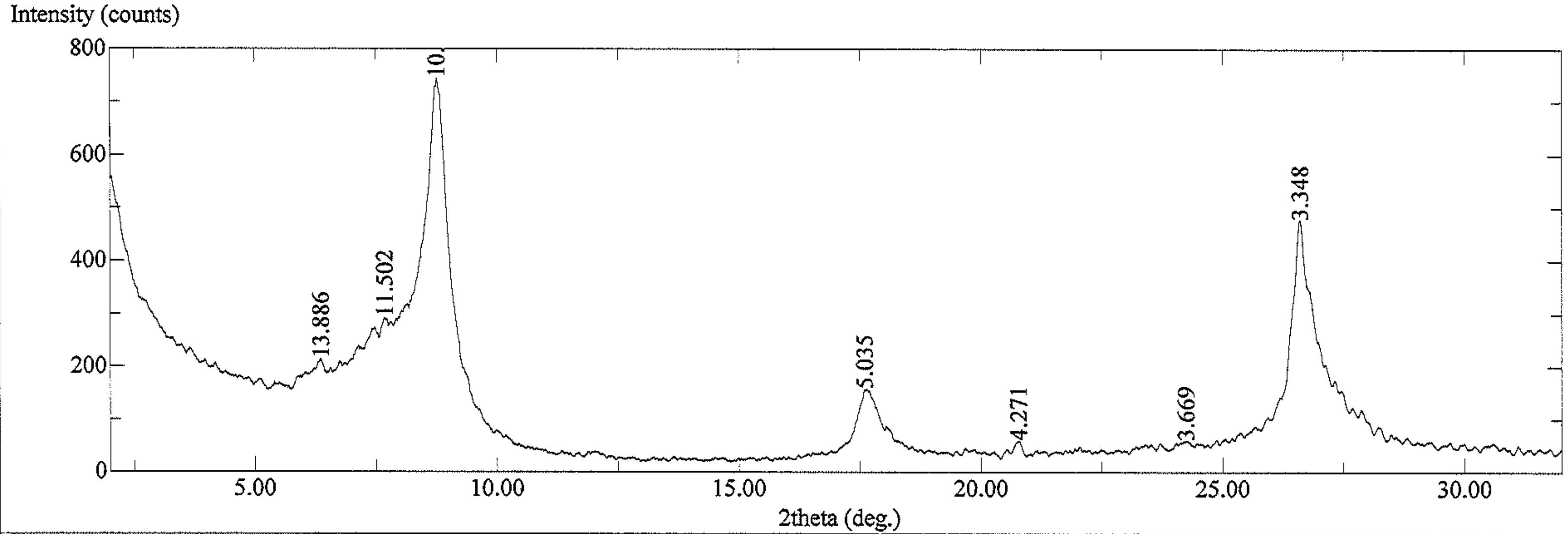
Sample :
Comment :
method : 2nd differential
File : SCFK.raw
Memo :
Typical width : 0.000 deg.
Date : April-08-09 13:29:00
Min. height : 0.00 counts
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.500	*****	13.5869	465	100						
2	8.440	*****	10.4677	445	96						
3	12.300	*****	7.1900	267	58						
4	17.700	*****	5.0068	99	22						
5	20.860	*****	4.2549	75	17						
6	24.820	*****	3.5843	201	44						
7	26.620	*****	3.3459	325	70						

Peak Search

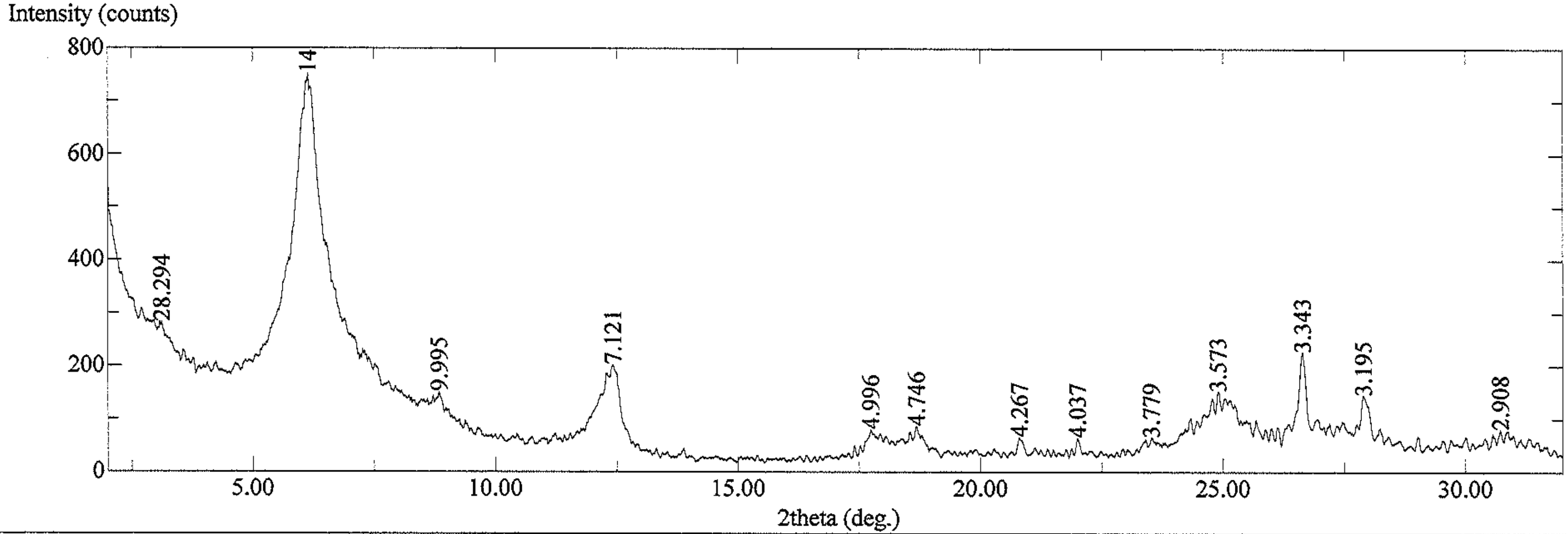
Sample :
Comment :
method : 2nd differential
File : SCFK550.raw
Memo :
Typical width : 0.000 deg.
Date : April-13-09 11:24:11
Min. height : 0.00 counts
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.360	*****	13.8857	214	29						
2	7.680	*****	11.5018	292	40						
3	8.760	*****	10.0860	744	100						
4	17.600	*****	5.0350	158	22						
5	20.780	*****	4.2711	61	9						
6	24.240	*****	3.6687	60	9						
7	26.600	*****	3.3483	478	65						

Peak Search

Sample :
Comment :
method : 2nd differential
File : SCGMg.raw
Memo :
Typical width : 0.000 deg.
Date : April-07-09 18:00:19
Operator : Administrator
Min. height : 0.00 counts



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	3.120	*****	28.2944	283	38						
2	6.140	*****	14.3827	751	100						
3	8.840	*****	9.9949	151	21						
4	12.420	*****	7.1208	202	27						
5	17.740	*****	4.9956	81	11						
6	18.680	*****	4.7462	87	12						
7	20.800	*****	4.2670	66	9						
8	22.000	*****	4.0369	65	9						
9	23.520	*****	3.7794	65	9						
10	24.900	*****	3.5729	152	21						
11	26.640	*****	3.3434	227	31						
12	27.900	*****	3.1952	145	20						
13	30.720	*****	2.9080	80	11						

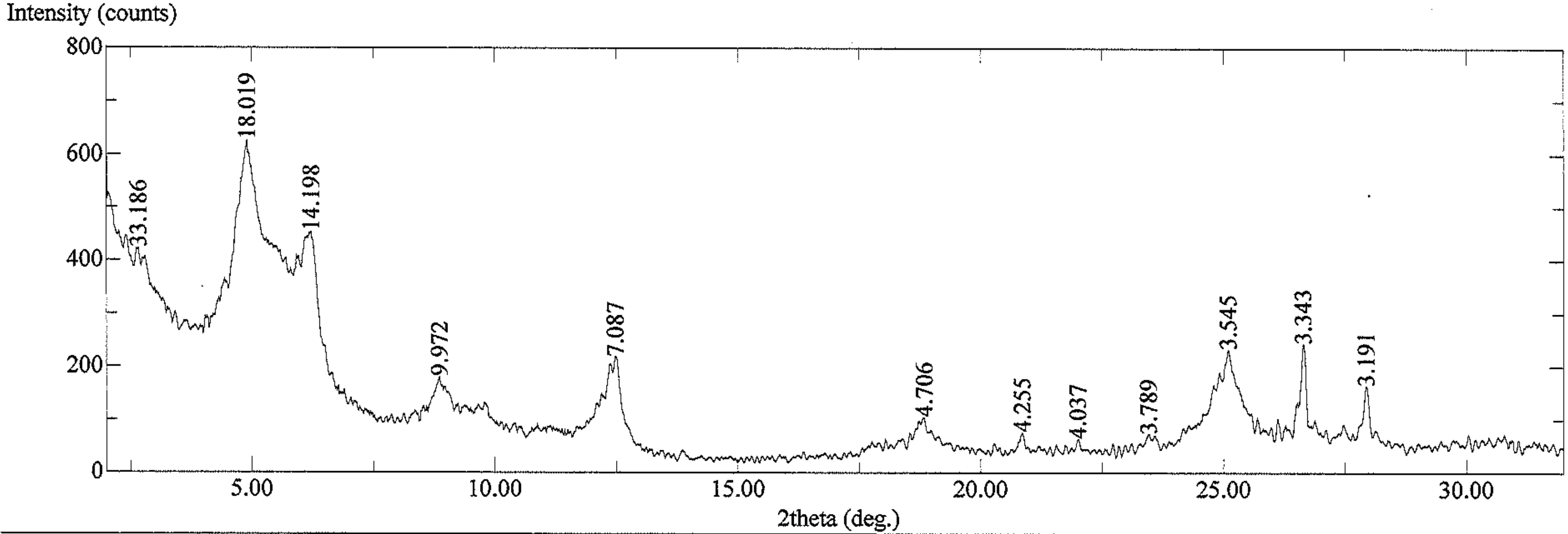
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCGMGG.raw
Memo :
Typical width : 0.000 deg.

Date : April-07-09 18:59:27
Min. height : 0.00 counts

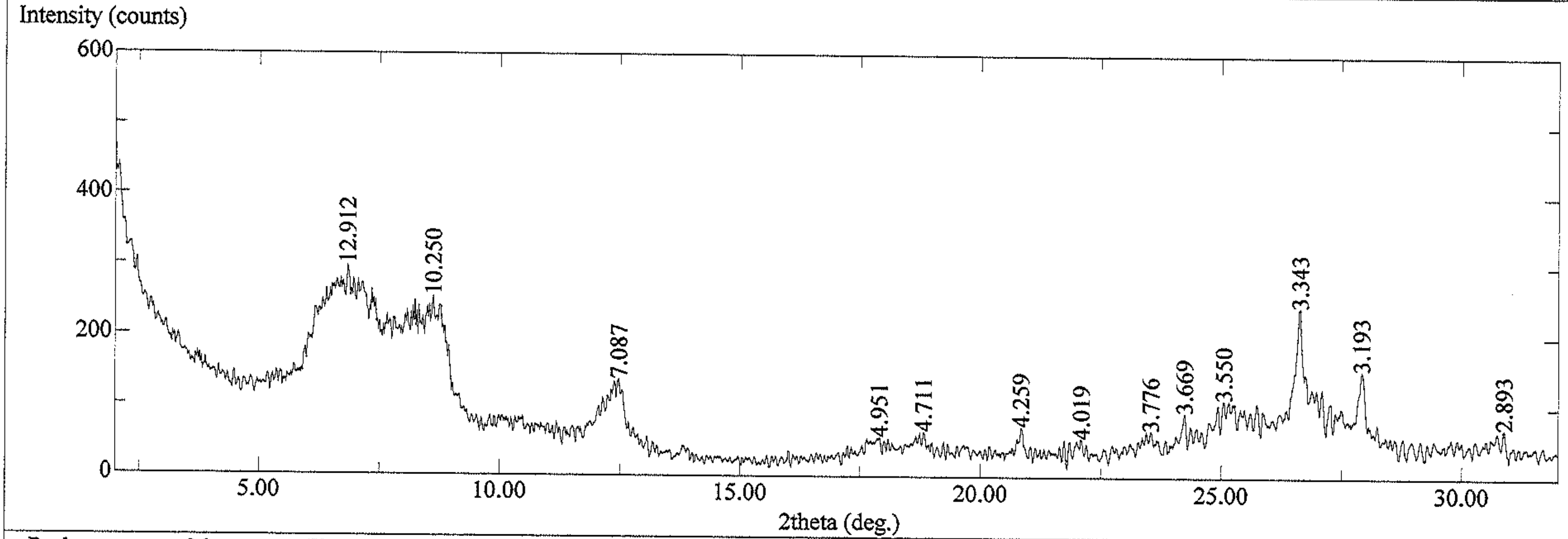
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	2.660	*****	33.1863	422	68						
2	4.900	*****	18.0193	625	100						
3	6.220	*****	14.1979	453	73						
4	8.860	*****	9.9724	181	29						
5	12.480	*****	7.0867	218	35						
6	18.840	*****	4.7063	105	17						
7	20.860	*****	4.2549	77	13						
8	22.000	*****	4.0369	64	11						
9	23.460	*****	3.7889	74	12						
10	25.100	*****	3.5449	233	38						
11	26.640	*****	3.3434	244	40						
12	27.940	*****	3.1907	164	27						

Peak Search

Sample :
Comment :
method : 2nd differential
File : SCGK.raw
Memo :
Typical width : 0.000 deg.
Date : April-07-09 15:07:57
Operator : Administrator
Min. height : 0.00 counts

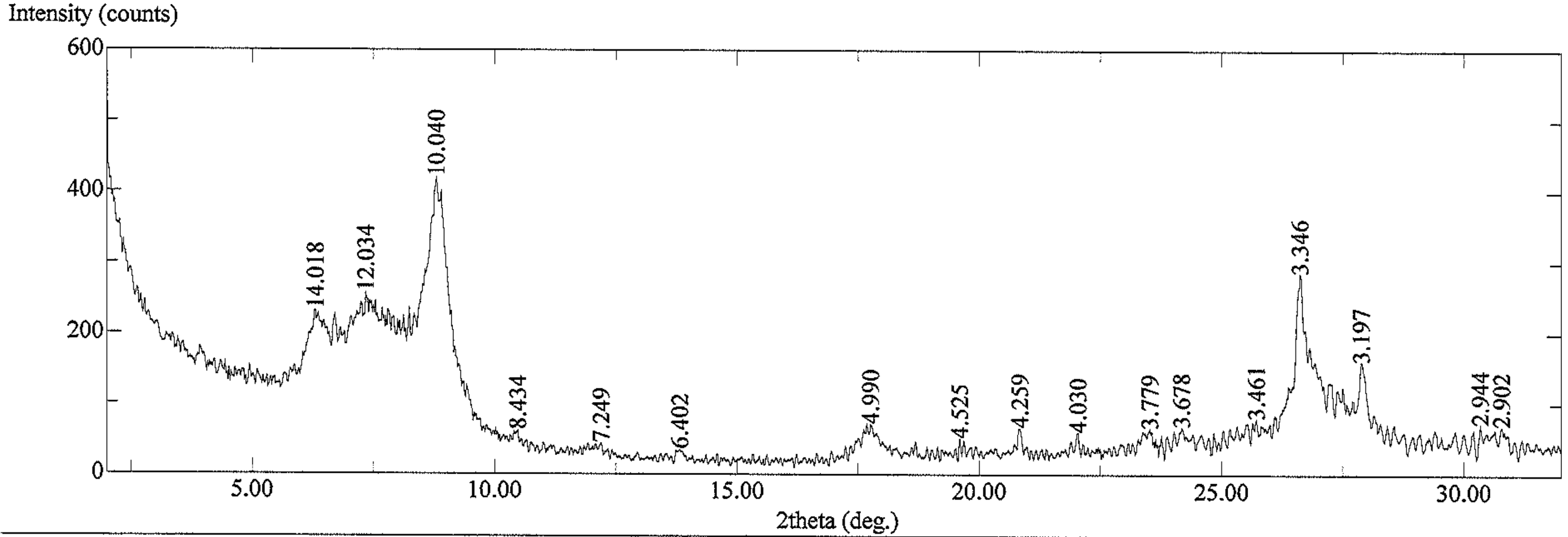


Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.840	*****	12.9123	297	100
2	8.620	*****	10.2495	254	86
3	12.480	*****	7.0867	137	47
4	17.900	*****	4.9513	57	20
5	18.820	*****	4.7113	65	22
6	20.840	*****	4.2589	72	25
7	22.100	*****	4.0189	55	19
8	23.540	*****	3.7762	67	23
9	24.240	*****	3.6687	93	32
10	25.060	*****	3.5505	111	38
11	26.640	*****	3.3434	243	82
12	27.920	*****	3.1929	153	52
13	30.880	*****	2.8933	71	24

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

Peak Search

Sample :
Comment :
method : 2nd differential
File : SCGK550.raw
Memo :
Typical width : 0.000 deg.
Date : April-13-09 08:29:50
Min. height : 0.00 counts
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.300	*****	14.0178	231	56
2	7.340	*****	12.0338	257	62
3	8.800	*****	10.0403	420	100
4	10.480	*****	8.4342	62	15
5	12.200	*****	7.2487	44	11
6	13.820	*****	6.4025	36	9
7	17.760	*****	4.9900	71	17
8	19.600	*****	4.5255	51	13
9	20.840	*****	4.2589	66	16
10	22.040	*****	4.0297	60	15
11	23.520	*****	3.7794	66	16
12	24.180	*****	3.6777	68	17
13	25.720	*****	3.4609	79	19
14	26.620	*****	3.3459	286	69
15	27.880	*****	3.1974	160	39
16	30.340	*****	2.9436	72	18
17	30.780	*****	2.9025	69	17

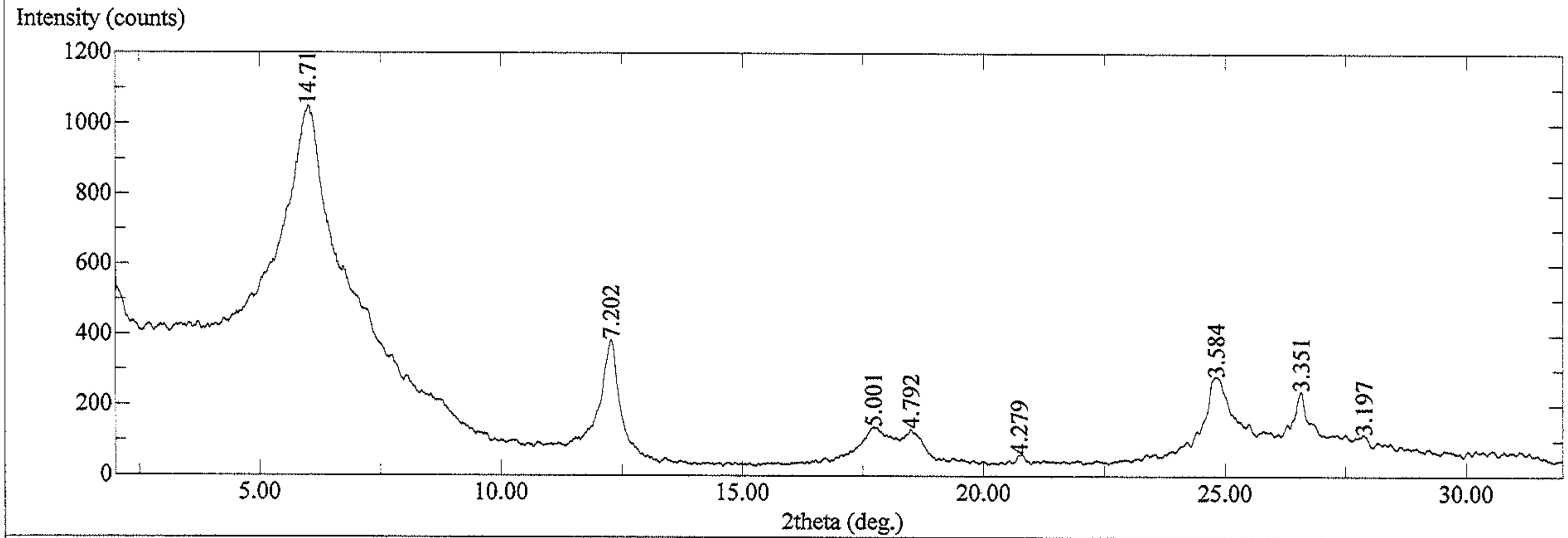
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCHMg.raw
Memo :
Typical width : 0.000 deg.

Date : April-08-09 14:48:18
Min. height : 0.00 counts

Operator : Administrator

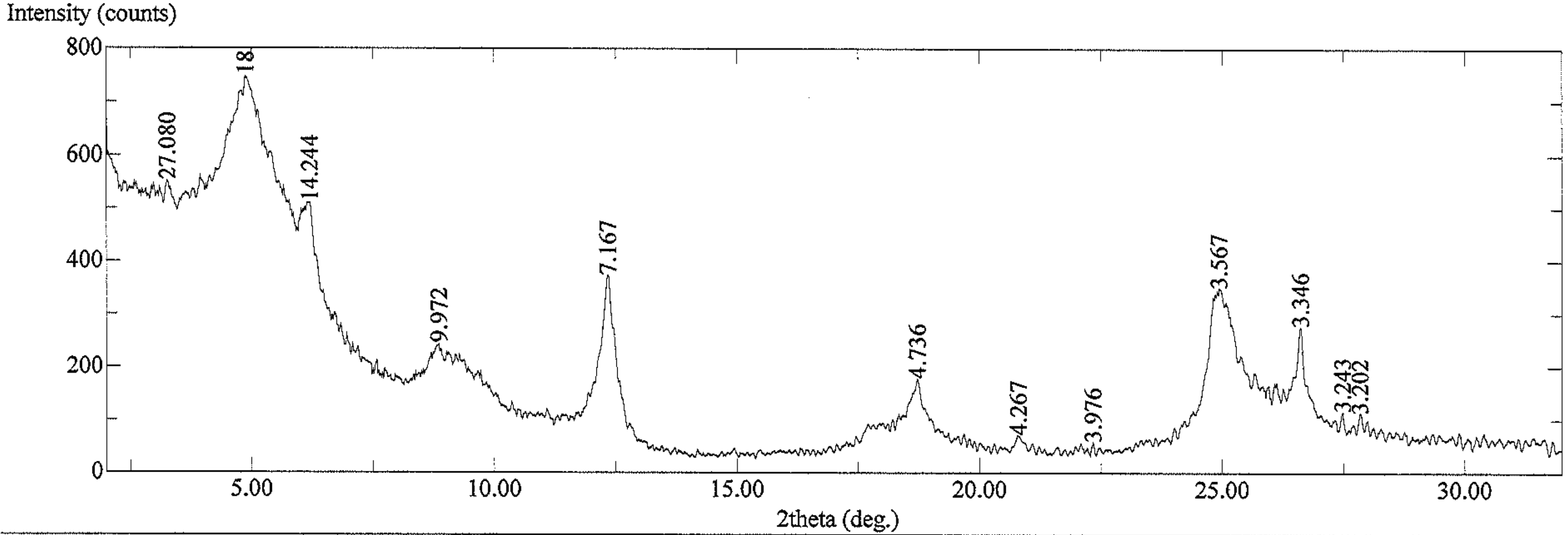


Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.000	*****	14.7180	1049	100
2	12.280	*****	7.2017	385	37
3	17.720	*****	5.0012	138	14
4	18.500	*****	4.7920	134	13
5	20.740	*****	4.2792	61	6
6	24.820	*****	3.5843	281	27
7	26.580	*****	3.3508	242	24
8	27.880	*****	3.1974	119	12

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

Peak Search

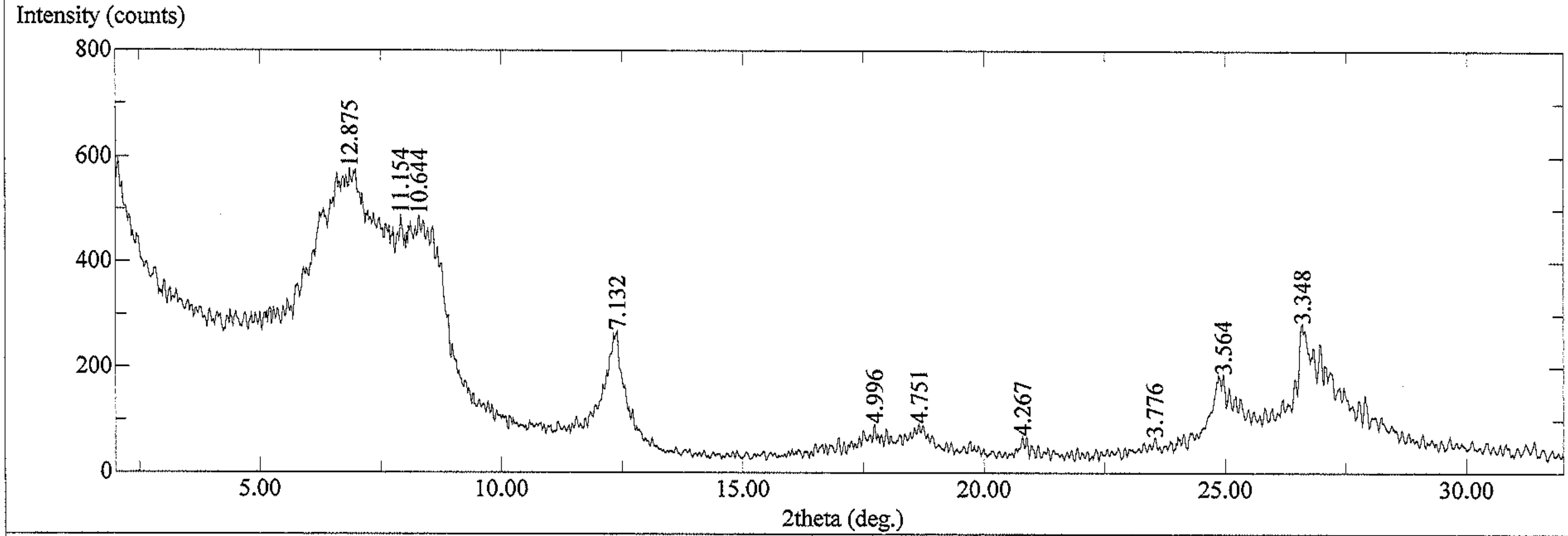
Sample :
Comment :
method : 2nd differential
File : SCHMGG.raw
Memo :
Typical width : 0.000 deg.
Date : April-08-09 15:11:19
Operator : Administrator
Min. height : 0.00 counts



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	3.260	*****	27.0796	552	74						
2	4.880	*****	18.0931	748	100						
3	6.200	*****	14.2437	510	69						
4	8.860	*****	9.9724	245	33						
5	12.340	*****	7.1668	373	50						
6	18.720	*****	4.7362	179	24						
7	20.800	*****	4.2670	71	10						
8	22.340	*****	3.9762	58	8						
9	24.940	*****	3.5673	350	47						
10	26.620	*****	3.3459	277	37						
11	27.480	*****	3.2431	116	16						
12	27.840	*****	3.2019	113	16						

Peak Search

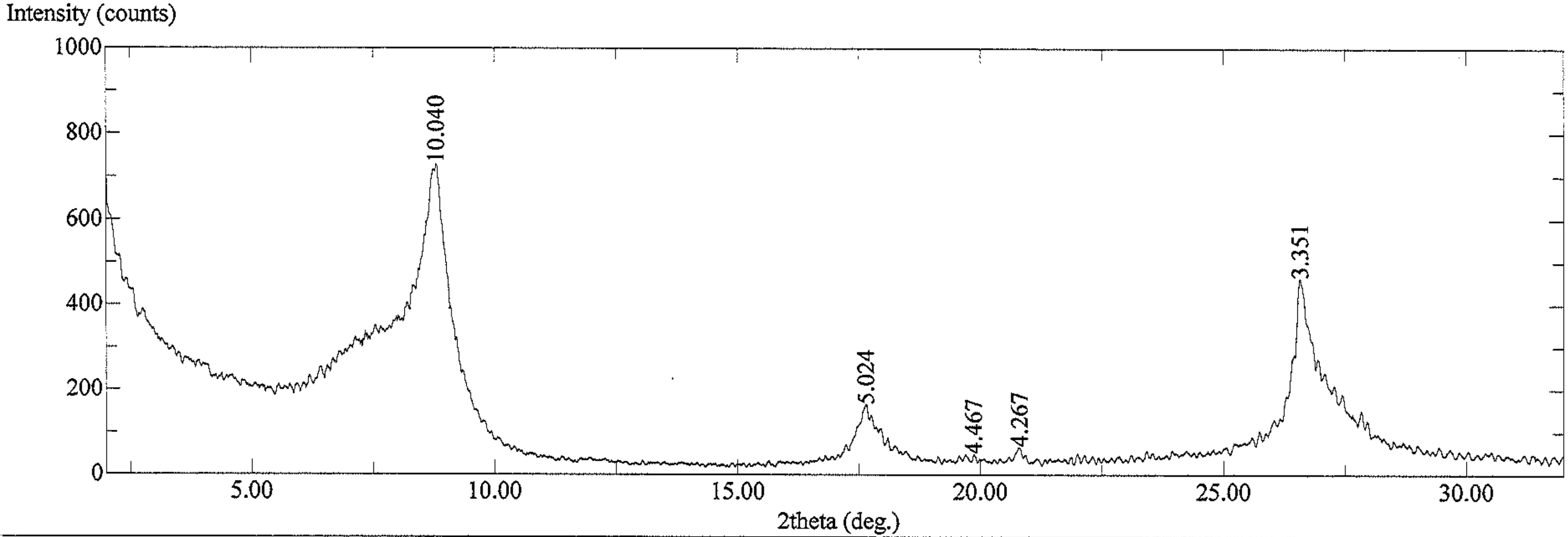
Sample :
Comment :
method : 2nd differential
File : SCHK.raw
Memo :
Typical width : 0.000 deg.
Date : April-08-09 14:31:34
Min. height : 0.00 counts
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.860	*****	12.8747	578	100						
2	7.920	*****	11.1538	489	85						
3	8.300	*****	10.6440	488	85						
4	12.400	*****	7.1323	270	47						
5	17.740	*****	4.9956	93	17						
6	18.660	*****	4.7513	93	17						
7	20.800	*****	4.2670	71	13						
8	23.540	*****	3.7762	68	12						
9	24.960	*****	3.5645	187	33						
10	26.600	*****	3.3483	284	50						

Peak Search

Sample	:	File	: SCHK550.raw	Date	: April-13-09 09:14:51	Operator	: Administrator
Comment	:	Memo	:				
method	: 2nd differential	Typical width	: 0.000 deg.	Min. height	: 0.00 counts		



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	8.800	*****	10.0403	730	100						
2	17.640	*****	5.0237	166	23						
3	19.860	*****	4.4668	50	7						
4	20.800	*****	4.2670	67	10						
5	26.580	*****	3.3508	464	64						

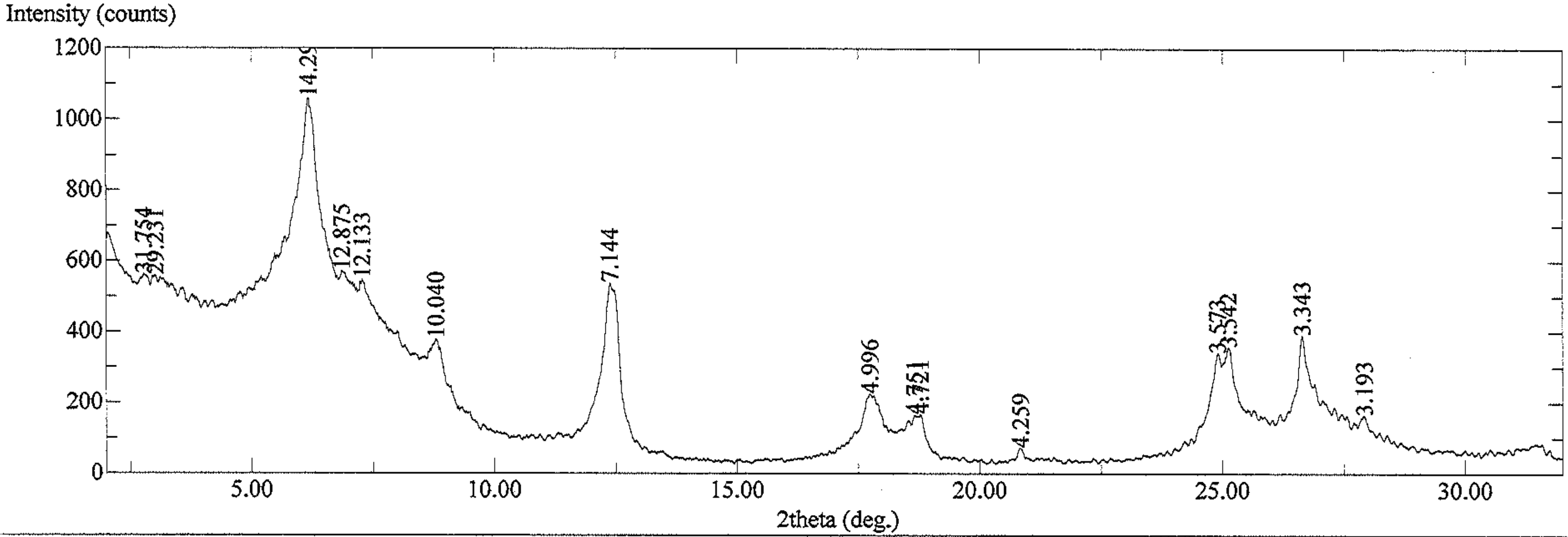
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCIMg.raw
Memo :
Typical width : 0.000 deg.

Date : April-09-09 15:24:47
Min. height : 0.00 counts

Operator : Administrator



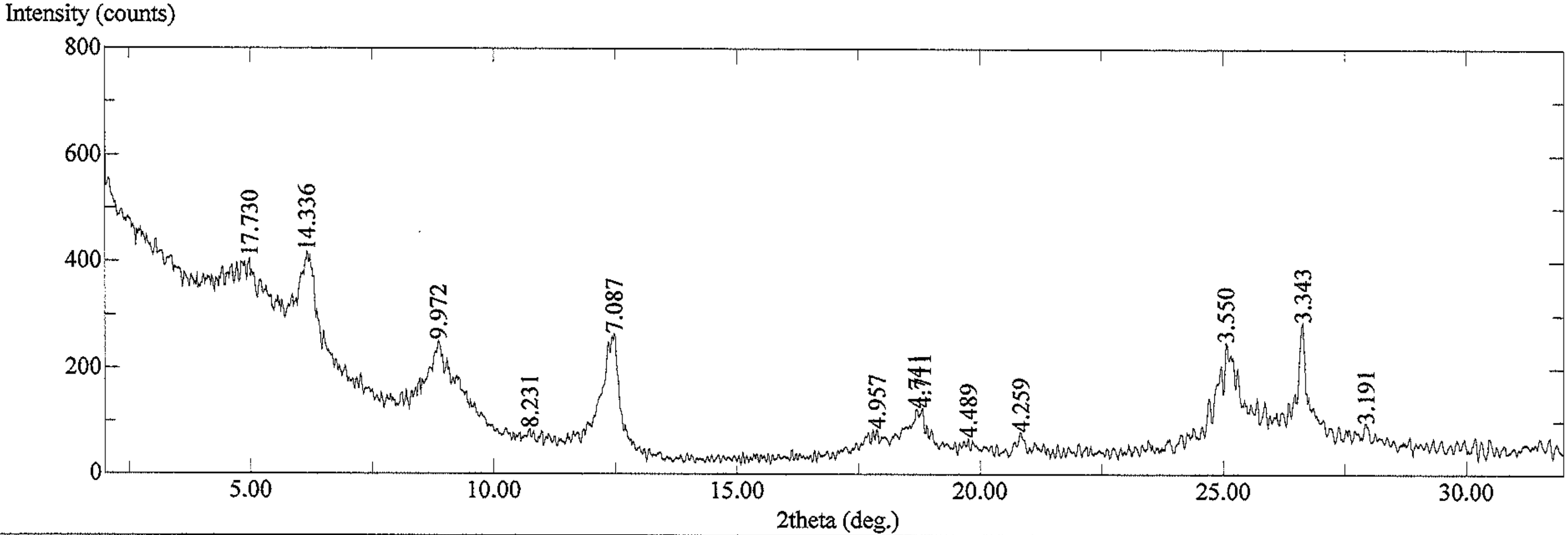
Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	2.780	*****	31.7541	563	54						
2	3.020	*****	29.2311	558	53						
3	6.180	*****	14.2897	1058	100						
4	6.860	*****	12.8747	571	54						
5	7.280	*****	12.1328	548	52						
6	8.800	*****	10.0403	379	36						
7	12.380	*****	7.1438	539	51						
8	17.740	*****	4.9956	226	22						
9	18.660	*****	4.7513	167	16						
10	18.780	*****	4.7212	169	16						
11	20.840	*****	4.2589	73	7						
12	24.900	*****	3.5729	342	33						
13	25.120	*****	3.5421	357	34						
14	26.640	*****	3.3434	393	38						
15	27.920	*****	3.1929	166	16						

Peak Search

Sample :
Comment :
method : 2nd differential

File : SCIMGG.raw
Memo :
Typical width : 0.000 deg.

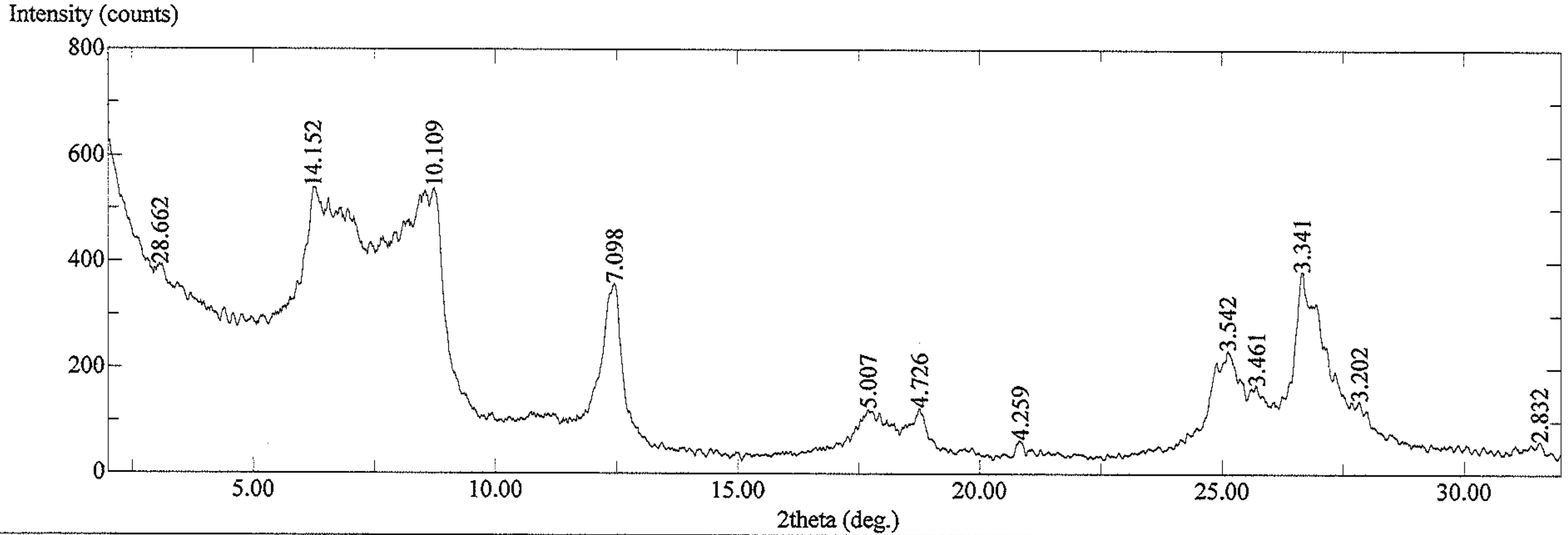
Date : April-09-09 15:41:53
Operator : Administrator
Min. height : 0.00 counts



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	4.980	*****	17.7300	406	98						
2	6.160	*****	14.3361	417	100						
3	8.860	*****	9.9724	253	61						
4	10.740	*****	8.2306	85	21						
5	12.480	*****	7.0867	265	64						
6	17.880	*****	4.9568	86	21						
7	18.700	*****	4.7412	125	30						
8	18.820	*****	4.7113	126	31						
9	19.760	*****	4.4892	69	17						
10	20.840	*****	4.2589	80	20						
11	25.060	*****	3.5505	251	61						
12	26.640	*****	3.3434	287	69						
13	27.940	*****	3.1907	97	24						

Peak Search

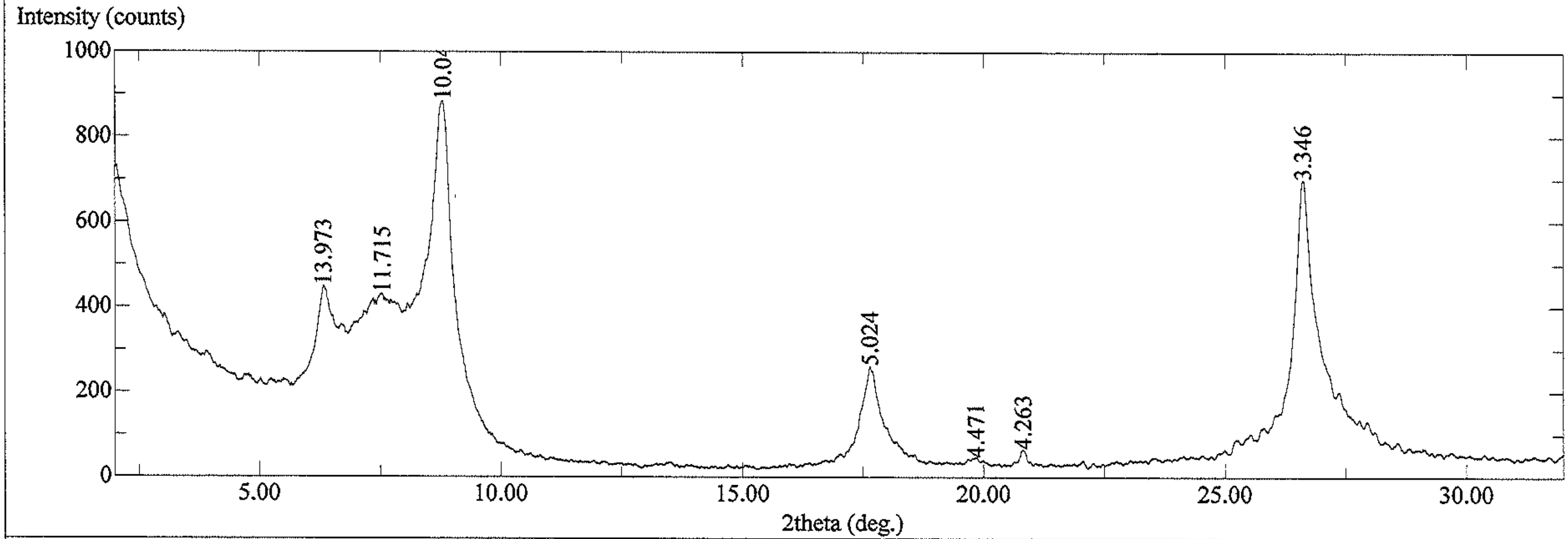
Sample :
Comment :
method : 2nd differential
File : SCIK.raw
Memo :
Typical width : 0.000 deg.
Date : April-09-09 15:05:07
Min. height : 0.00 counts
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	3.080	*****	28.6618	392	73						
2	6.240	*****	14.1525	538	100						
3	8.740	*****	10.1091	538	100						
4	12.460	*****	7.0981	359	67						
5	17.700	*****	5.0068	123	23						
6	18.760	*****	4.7262	125	24						
7	20.840	*****	4.2589	64	12						
8	25.120	*****	3.5421	234	44						
9	25.720	*****	3.4609	168	32						
10	26.660	*****	3.3409	383	72						
11	27.840	*****	3.2019	139	26						
12	31.560	*****	2.8325	63	12						

Peak Search

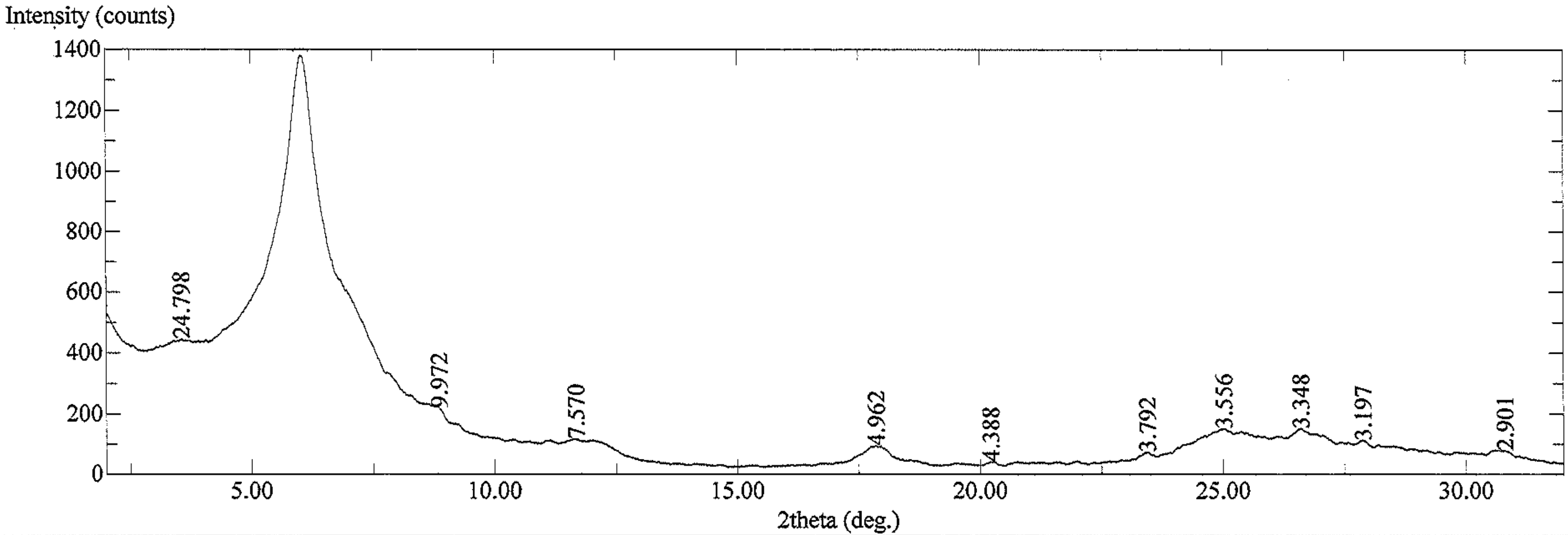
Sample :
Comment :
method : 2nd differential
File : SCIK550.raw
Memo :
Typical width : 0.000 deg.
Date : April-13-09 09:52:04
Min. height : 0.00 counts
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.320	*****	13.9735	449	51						
2	7.540	*****	11.7150	430	49						
3	8.800	*****	10.0403	884	100						
4	17.640	*****	5.0237	262	30						
5	19.840	*****	4.4713	46	6						
6	20.820	*****	4.2630	67	8						
7	26.620	*****	3.3459	701	80						

Peak Search

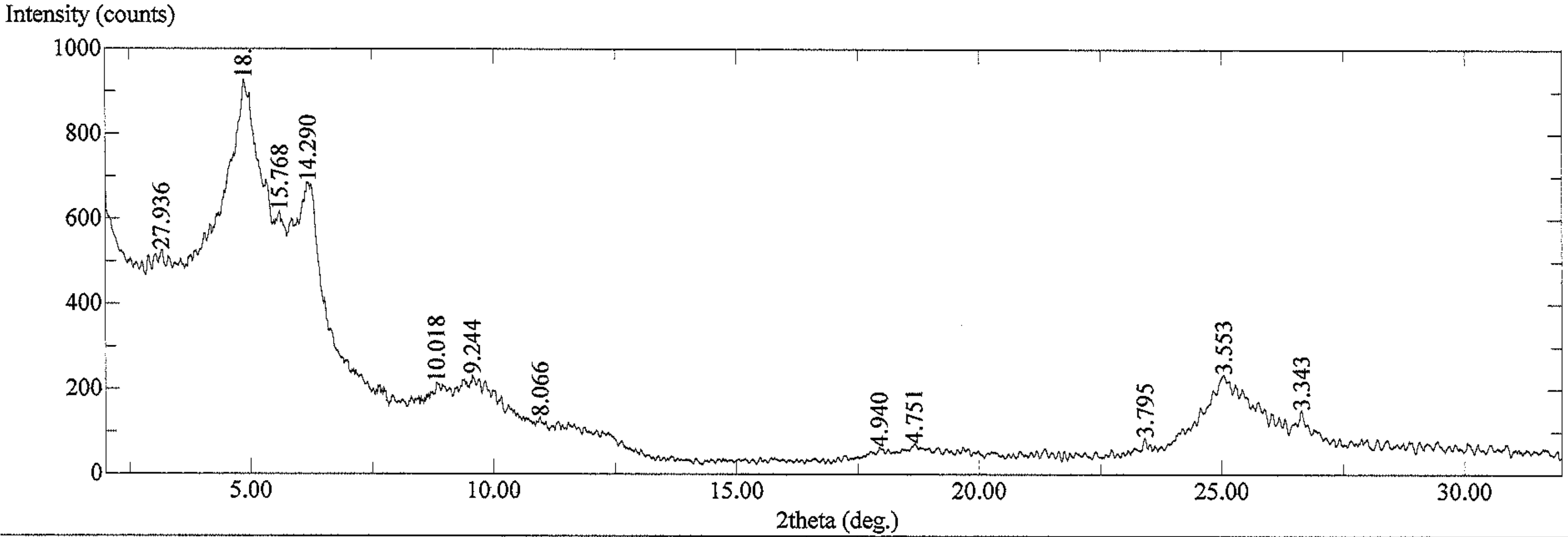
Sample :
File : SCJMg.raw
Date : April-09-09 16:15:07
Operator : Administrator
Comment :
Memo :
method : 2nd differential
Typical width : 0.000 deg.
Min. height : 0.00 counts



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	3.560	*****	24.7983	445	33						
2	6.020	*****	14.6692	1380	100						
3	8.860	*****	9.9724	218	16						
4	11.680	*****	7.5703	116	9						
5	17.860	*****	4.9623	94	7						
6	20.220	*****	4.3881	42	4						
7	23.440	*****	3.7921	73	6						
8	25.020	*****	3.5561	151	11						
9	26.600	*****	3.3483	151	11						
10	27.880	*****	3.1974	112	9						
11	30.800	*****	2.9006	78	6						

Peak Search

Sample : File : SCJMGG.raw Date : April-09-09 16:32:01 Operator : Administrator
Comment : Memo :
method : 2nd differential Typical width : 0.000 deg. Min. height : 0.00 counts



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	3.160	*****	27.9364	525	57						
2	4.860	*****	18.1675	928	100						
3	5.600	*****	15.7684	617	67						
4	6.180	*****	14.2897	685	74						
5	8.820	*****	10.0176	214	24						
6	9.560	*****	9.2437	235	26						
7	10.960	*****	8.0659	134	15						
8	17.940	*****	4.9403	65	7						
9	18.660	*****	4.7513	73	8						
10	23.420	*****	3.7953	88	10						
11	25.040	*****	3.5533	236	26						
12	26.640	*****	3.3434	153	17						

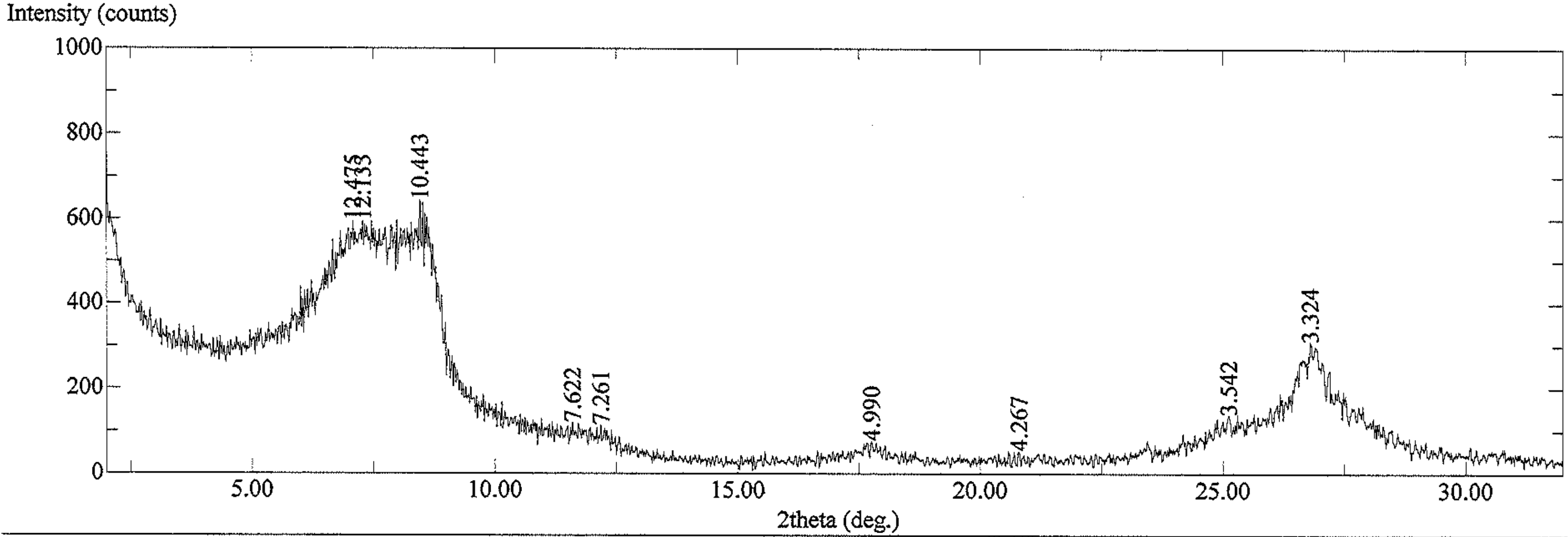
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCJK.raw
Memo :
Typical width : 0.000 deg.

Date : April-09-09 15:58:28
Min. height : 0.00 counts

Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	7.080	*****	12.4751	594	93						
2	7.280	*****	12.1328	595	93						
3	8.460	*****	10.4430	642	100						
4	11.600	*****	7.6223	119	19						
5	12.180	*****	7.2606	113	18						
6	17.760	*****	4.9900	77	13						
7	20.800	*****	4.2670	54	9						
8	25.120	*****	3.5421	138	22						
9	26.800	*****	3.3238	311	49						

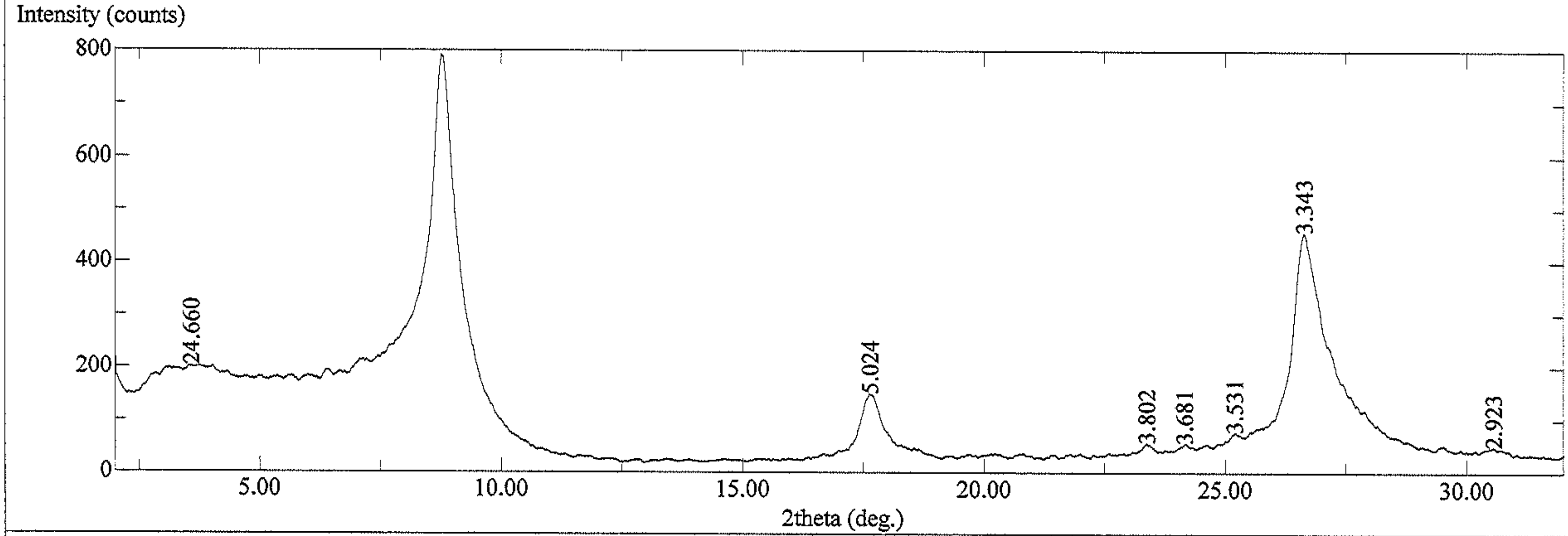
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCJK550.raw
Memo :
Typical width : 0.000 deg.

Date : April-13-09 09:32:57
Min. height : 0.00 counts

Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	3.580	*****	24.6598	201	26
2	8.760	*****	10.0860	791	100
3	17.640	*****	5.0237	149	19
4	23.380	*****	3.8017	57	8
5	24.160	*****	3.6807	56	8
6	25.200	*****	3.5311	77	10
7	26.640	*****	3.3434	457	58
8	30.560	*****	2.9229	50	7

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

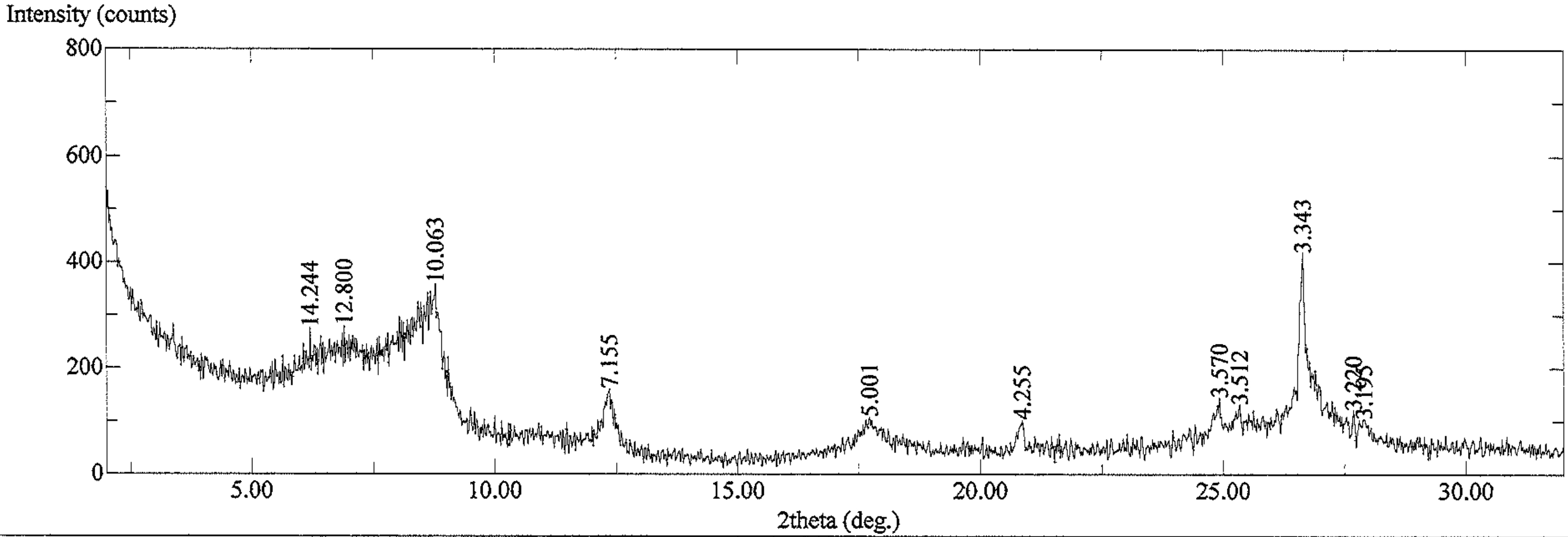
Peak Search

Sample :
Comment :
method : 2nd differential

File : SCKMg.raw
Memo :
Typical width : 0.000 deg.

Date : March-19-09 16:22:47
Min. height : 0.00 counts

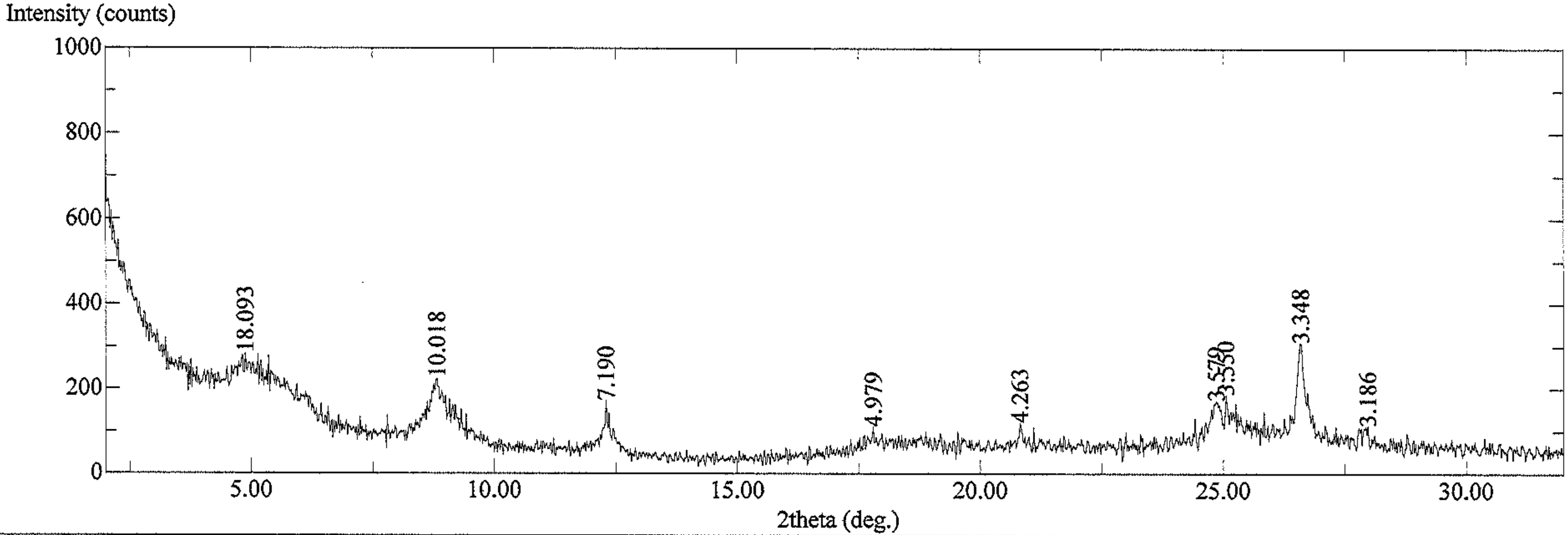
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.200	*****	14.2437	275	66						
2	6.900	*****	12.8002	279	67						
3	8.780	*****	10.0631	359	86						
4	12.360	*****	7.1553	161	39						
5	17.720	*****	5.0012	107	26						
6	20.860	*****	4.2549	103	25						
7	24.920	*****	3.5701	145	35						
8	25.340	*****	3.5119	131	32						
9	26.640	*****	3.3434	419	100						
10	27.680	*****	3.2201	121	29						
11	27.900	*****	3.1952	105	25						

Peak Search

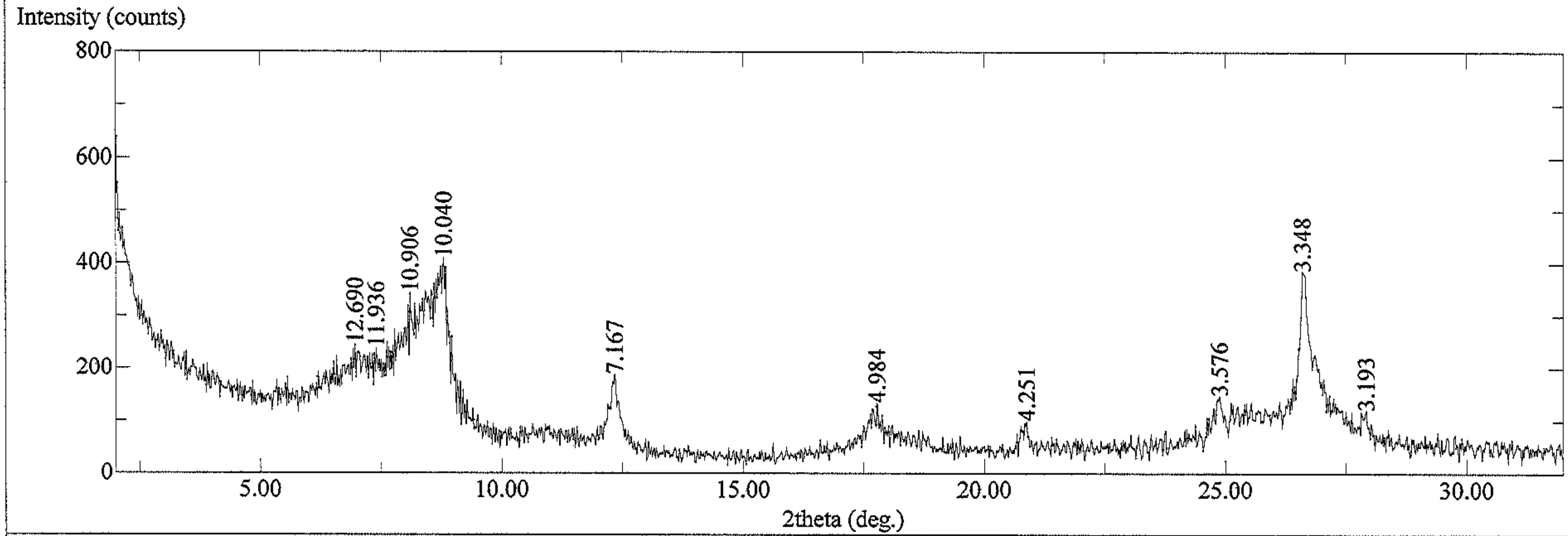
Sample :
File : SCKMGG.raw
Date : March-20-09 15:37:51
Operator : Administrator
Comment :
Memo :
method : 2nd differential
Typical width : 0.000 deg.
Min. height : 0.00 counts



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	4.880	*****	18.0931	283	92						
2	8.820	*****	10.0176	224	73						
3	12.300	*****	7.1900	171	56						
4	17.800	*****	4.9789	111	36						
5	20.820	*****	4.2630	121	40						
6	24.860	*****	3.5786	172	56						
7	25.060	*****	3.5505	186	61						
8	26.600	*****	3.3483	310	100						
9	27.980	*****	3.1862	114	37						

Peak Search

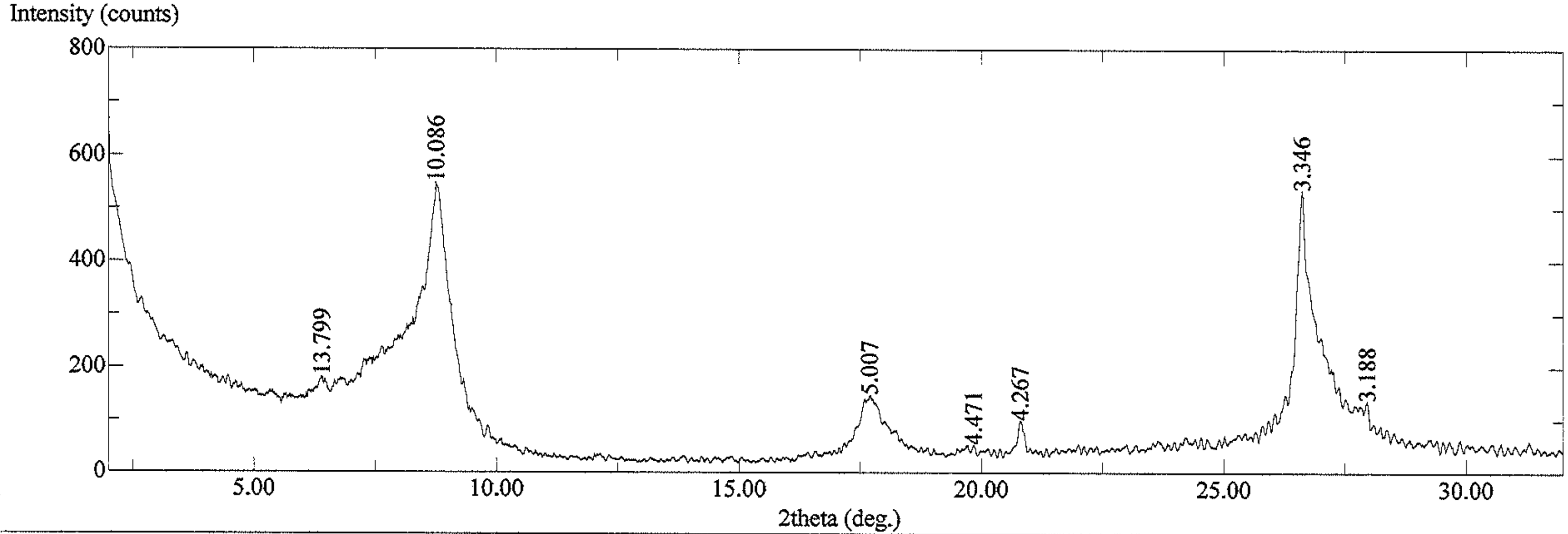
Sample :
Comment :
method : 2nd differential
File : SCKK.raw
Memo :
Typical width : 0.000 deg.
Date : March-20-09 15:59:24
Min. height : 0.00 counts
Operator : Administrator



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io	Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.960	*****	12.6899	245	61						
2	7.400	*****	11.9364	238	59						
3	8.100	*****	10.9063	343	84						
4	8.800	*****	10.0403	408	100						
5	12.340	*****	7.1668	188	47						
6	17.780	*****	4.9844	135	34						
7	20.880	*****	4.2509	100	25						
8	24.880	*****	3.5758	148	37						
9	26.600	*****	3.3483	386	95						
10	27.920	*****	3.1929	121	30						

Peak Search

Sample	:	File	: SCKK550.raw	Date	: April-13-09 10:46:34	Operator	: Administrator
Comment	:	Memo	:				
method	: 2nd differential	Typical width	: 0.000 deg.	Min. height	: 0.00 counts		



Peak no.	2theta	Flex Width	d-value	Intensity	I/Io
1	6.400	*****	13.7990	182	34
2	8.760	*****	10.0860	547	100
3	17.700	*****	5.0068	147	27
4	19.840	*****	4.4713	54	10
5	20.800	*****	4.2670	100	19
6	26.620	*****	3.3459	535	98
7	27.960	*****	3.1885	138	26

Peak no.	2theta	Flex Width	d-value	Intensity	I/Io

APPENDIX II-D

CHAIN OF CUSTODIES AND LAB REPORTS FOR ANALYSES OF CONSTITUENTS

Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

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Phone 626.336.2139 Fax 626.336.2634
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CERTIFICATE OF ANALYSIS

Client: Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong

Phone: (650) 641-8258
Fax: (650) 960-0739

Report Date: 07/18/08 10:38
Received Date: 07/01/08 09:30
Turn Around: Normal

Work Order #: 8070201

Client Project: 27011-07-3200

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Norman Wong :

Enclosed are the results of analyses for samples received 07/01/08 09:30 with the Chain of Custody document. The samples were received in good condition. The samples were received at 4.8 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

hauanguyen

Hai Van Nguyen
Project Manager

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8070201
Project ID: 27011-07-3200

Date Received: 07/01/08 09:30
Date Reported: 07/18/08 10:38

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
SCRWA B 2514F	Vector Engineering		8070201-01	Water	06/25/08 11:30
SJ/SC 2514L	Vector Engineering		8070201-02	Water	06/27/08 10:30
SCRWA B 2514F	Vector Engineering		8070201-03	Water	06/25/08 11:30
SJ/SC 2514L	Vector Engineering		8070201-04	Water	06/27/08 10:30
SJ/SC 2514L	Vector Engineering		8070201-05	Water	06/27/08 10:30
SCRWA-B 2514F	Vector Engineering		8070201-06	Water	06/27/08 10:30
SJ/SC-1 2514L	Vector Engineering		8070201-07	Water	06/30/08 08:30
SJ/SC-1 2514L	Vector Engineering		8070201-08	Water	06/30/08 08:30

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8070201
Project ID: 27011-07-3200

Date Received: 07/01/08 09:30
Date Reported: 07/18/08 10:38

SCRWA B 2514F 8070201-01 (Water) **Date** **06/25/08 11:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
2-Butanone	**5.2**	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Bromodichloromethane	**2.1**	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8070201
Project ID: 27011-07-3200

Date Received: 07/01/08 09:30
Date Reported: 07/18/08 10:38

SCRWA B 2514F 8070201-01 (Water) **Date** **06/25/08 11:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Chloroform	**9.1**	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	

SCRWA B 2514F 8070201-01 (Water) **Date** **06/25/08 11:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	100	%	*70-130*		*EPA 524.2*	*W8G0098*	*07/02/08*	*07/02/08*	mdt	
Surrogate: 4-Bromofluorobenzene	98	%	*70-130*		*EPA 524.2*	*W8G0098*	*07/02/08*	*07/02/08*	mdt	

SJ/SC 2514L 8070201-02 (Water) **Date** **06/27/08 10:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SJ/SC 2514L 8070201-02 (Water) **Date** **06/27/08 10:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Bromodichloromethane	**2.5**	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Chloroform	**3.6**	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Dibromochloromethane	**0.84**	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8070201
Project ID: 27011-07-3200

Date Received: 07/01/08 09:30
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SJ/SC 2514L 8070201-02 (Water) **Date** **06/27/08 10:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/02/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	101	%	*70-130*		*EPA 524.2*	*W8G0098*	*07/02/08*	*07/02/08*	mdt	
Surrogate: 4-Bromofluorobenzene	99	%	*70-130*		*EPA 524.2*	*W8G0098*	*07/02/08*	*07/02/08*	mdt	

SCRWA B 2514F 8070201-03 (Water) **Date** **06/25/08 11:30**

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	

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SCRWA B 2514F 8070201-03 (Water) Date 06/25/08 11:30

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	103	%	*70-130*		*EPA 552.2*	*W8G0077*	*07/02/08*	*07/02/08*	cwn	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8G0170	07/02/08	07/02/08	mac	

SJ/SC 2514L 8070201-04 (Water) Date 06/27/08 10:30

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Dichloroacetic acid (dcaa)	**1.5**	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Total HAA5	**1.5**	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0077	07/02/08	07/02/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	107	%	*70-130*		*EPA 552.2*	*W8G0077*	*07/02/08*	*07/02/08*	cwn	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8G0170	07/02/08	07/02/08	mac	

SJ/SC 2514L 8070201-05 (Water) Date 06/27/08 10:30

SJ/SC 2514L 8070201-05 (Water) Date 06/27/08 10:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	160	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Bicarbonate Alkalinity as HCO3	200	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8G0094	07/02/08	07/02/08	hml	
Dissolved Organic Carbon	5.9	mg/l	0.30	1	SM5310C	W8G0083	07/02/08	07/02/08	jlp	
Total Organic Carbon (TOC)	6.1	mg/l	0.30	1	SM5310C	W8G0082	07/02/08	07/02/08	jlp	

SCRWA-B 2514F 8070201-06 (Water) Date 06/27/08 10:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8G0094	07/02/08	07/02/08	hml	

SJ/SC-1 2514L 8070201-07 (Water) Date 06/30/08 08:30

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	440	ug/l	10	1	EPA 200.7	W8G0073	07/02/08	07/02/08	jba	
Calcium	50	mg/l	0.10	1	EPA 200.7	W8G0073	07/02/08	07/02/08	jba	
Potassium	16	mg/l	0.10	1	EPA 200.7	W8G0073	07/02/08	07/02/08	jba	
Magnesium	27	mg/l	0.10	1	EPA 200.7	W8G0073	07/02/08	07/02/08	jba	
Sodium	130	mg/l	0.50	1	EPA 200.7	W8G0073	07/02/08	07/02/08	jba	

SJ/SC-1 2514L 8070201-08 (Water) Date 06/30/08 08:30

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Chloride	200	mg/l	2.5	5	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Nitrite as N	1700	ug/l	150	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	O-04
Nitrate as N	7600	ug/l	110	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	O-04

Locus Technologies
299 Fairchild Drive
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Report ID: 8070201
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SJ/SC-1 2514L 8070201-08 (Water) **Date** **06/30/08 08:30**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Sulfate as SO4	100	mg/l	2.5	5	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	

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QUALITY CONTROL SECTION

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0105 - EPA 300.0/300.1										
Blank (W8G0105-BLK1)				Analyzed: 07/02/08						
Bromide	ND	0.50	mg/l							
Chloride	ND	0.50	mg/l							
Nitrate as N	ND	110	ug/l							
Nitrite as N	ND	150	ug/l							
Sulfate as SO4	ND	0.50	mg/l							
LCS (W8G0105-BS1)				Analyzed: 07/02/08						
Bromide	8.77	0.50	mg/l	8.00		110	90-110			
Chloride	4.20	0.50	mg/l	4.00		105	90-110			
Nitrate as N	1860	110	ug/l	1810		103	90-110			
Nitrite as N	603	150	ug/l	608		99	90-110			
Sulfate as SO4	8.16	0.50	mg/l	8.00		102	90-110			
Matrix Spike (W8G0105-MS1)		Source: 8062617-03		Analyzed: 07/03/08						
Bromide	88.0	5.0	mg/l	80.0	ND	110	83-113			
Chloride	96.0	5.0	mg/l	40.0	53.0	107	72-118			
Nitrate as N	19500	1100	ug/l	18100	900	103	80-107			
Nitrite as N	6030	1500	ug/l	6080	ND	99	86-111			
Sulfate as SO4	151	5.0	mg/l	80.0	70.6	101	84-114			
Matrix Spike (W8G0105-MS2)		Source: 8062631-01		Analyzed: 07/03/08						
Bromide	438	25	mg/l	400	0.242	109	83-113			
Chloride	478	25	mg/l	200	260	109	72-118			
Nitrate as N	110000	5600	ug/l	90300	17400	103	80-107			
Nitrite as N	29800	7600	ug/l	30400	178	97	86-111			
Sulfate as SO4	889	25	mg/l	400	485	101	84-114			
Matrix Spike Dup (W8G0105-MSD1)		Source: 8062617-03		Analyzed: 07/03/08						
Bromide	88.0	5.0	mg/l	80.0	ND	110	83-113	0.07	20	
Chloride	96.7	5.0	mg/l	40.0	53.0	109	72-118	0.7	20	
Nitrate as N	19400	1100	ug/l	18100	900	102	80-107	0.8	20	
Nitrite as N	5980	1500	ug/l	6080	ND	98	86-111	0.8	20	
Sulfate as SO4	151	5.0	mg/l	80.0	70.6	101	84-114	0.1	20	

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0105 - EPA 300.0/300.1										
Matrix Spike Dup (W8G0105-MSD2)	**Source: 8062631-01**		Analyzed: 07/03/08							
Bromide	438	25	mg/l	400	0.242	109	83-113	0.05	20	
Chloride	475	25	mg/l	200	260	107	72-118	0.6	20	
Nitrate as N	109000	5600	ug/l	90300	17400	102	80-107	0.9	20	
Nitrite as N	29800	7600	ug/l	30400	178	97	86-111	0.2	20	
Sulfate as SO4	886	25	mg/l	400	485	100	84-114	0.4	20	

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0082 - SM5310										
Blank (W8G0082-BLK1)				Analyzed: 07/02/08						
Total Organic Carbon (TOC)	ND	0.30	mg/l							
LCS (W8G0082-BS1)				Analyzed: 07/02/08						
Total Organic Carbon (TOC)	4.79	0.30	mg/l	5.00		96	90-110			
LCS Dup (W8G0082-BSD1)				Analyzed: 07/02/08						
Total Organic Carbon (TOC)	4.82	0.30	mg/l	5.00		96	90-110	0.7	20	
Batch W8G0083 - SM5310										
Blank (W8G0083-BLK1)				Analyzed: 07/02/08						
Dissolved Organic Carbon	ND	0.30	mg/l							
LCS (W8G0083-BS1)				Analyzed: 07/02/08						
Dissolved Organic Carbon	4.79	0.30	mg/l	5.00		96	80-120			
LCS Dup (W8G0083-BSD1)				Analyzed: 07/02/08						
Dissolved Organic Carbon	4.80	0.30	mg/l	5.00		96	80-120	0.2	20	
Batch W8G0087 - General Preparation										
Blank (W8G0087-BLK1)				Analyzed: 07/02/08						
Alkalinity as CaCO3	ND	2.0	mg/l							
Bicarbonate Alkalinity as HCO3	ND	2.0	mg/l							
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l							
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l							

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0087 - General Preparation										
LCS (W8G0087-BS1)				Analyzed: 07/02/08						
Alkalinity as CaCO3	44.2	2.0	mg/l	45.3		98	94-108			
Bicarbonate Alkalinity as HCO3	53.9	2.0	mg/l	55.3		98	94-108			
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Duplicate (W8G0087-DUP1)		**Source: 8070201-05**		Analyzed: 07/02/08						
Alkalinity as CaCO3	161	2.0	mg/l		165			2	15	
Bicarbonate Alkalinity as HCO3	196	2.0	mg/l		201			2	15	
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Batch W8G0094 - General Preparation										
Blank (W8G0094-BLK1)				Analyzed: 07/02/08						
Total Cyanide	ND	5.0	ug/l							
LCS (W8G0094-BS1)				Analyzed: 07/02/08						
Total Cyanide	50.0	5.0	ug/l	50.0		100	90-110			
Matrix Spike (W8G0094-MS1)		**Source: 8062667-07**		Analyzed: 07/02/08						
Total Cyanide	43.4	5.0	ug/l	50.0	ND	87	90-110			MS-01
Matrix Spike Dup (W8G0094-MSD1)		**Source: 8062667-07**		Analyzed: 07/02/08						
Total Cyanide	43.1	5.0	ug/l	50.0	ND	86	90-110	0.7	20	MS-01

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0077 - EPA 500 Series										
Blank (W8G0077-BLK1)				Analyzed: 07/03/08						
Surrogate: 2,3-Dibromopropionic acid	*10.2*		*ug/l*	*10.0*		*102*	*70-130*			
Bromochloroacetic acid (bcaa)	ND	1.0	ug/l							
Dibromoacetic acid (dbaa)	ND	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	2.0	ug/l							
Total HAA5	ND	5.0	ug/l							
Trichloroacetic acid (tcaa)	ND	1.0	ug/l							
LCS (W8G0077-BS1)				Analyzed: 07/03/08						
Surrogate: 2,3-Dibromopropionic acid	*10.2*		*ug/l*	*10.0*		*102*	*70-130*			
Bromochloroacetic acid (bcaa)	10.0	1.0	ug/l	10.0		100	70-130			
Dibromoacetic acid (dbaa)	9.78	1.0	ug/l	10.0		98	70-130			
Dichloroacetic acid (dcaa)	10.3	1.0	ug/l	10.0		103	70-130			
Monobromoacetic acid (mbaa)	8.30	1.0	ug/l	10.0		83	70-130			
Monochloroacetic acid (mcaa)	8.42	2.0	ug/l	10.0		84	70-130			
Trichloroacetic acid (tcaa)	9.20	1.0	ug/l	10.0		92	70-130			
Matrix Spike (W8G0077-MS1)	**Source: 8070201-03**			Analyzed: 07/03/08						
Surrogate: 2,3-Dibromopropionic acid	*10.1*		*ug/l*	*10.0*		*101*	*70-130*			
Bromochloroacetic acid (bcaa)	10.5	1.0	ug/l	10.0	ND	105	70-130			
Dibromoacetic acid (dbaa)	10.4	1.0	ug/l	10.0	ND	104	70-130			
Dichloroacetic acid (dcaa)	11.4	1.0	ug/l	10.0	0.456	110	70-130			
Monobromoacetic acid (mbaa)	8.03	1.0	ug/l	10.0	ND	80	70-130			
Monochloroacetic acid (mcaa)	10.4	2.0	ug/l	10.0	ND	104	70-130			
Trichloroacetic acid (tcaa)	9.55	1.0	ug/l	10.0	ND	95	70-130			
Matrix Spike Dup (W8G0077-MSD1)	**Source: 8070201-03**			Analyzed: 07/03/08						
Surrogate: 2,3-Dibromopropionic acid	*10.8*		*ug/l*	*10.0*		*108*	*70-130*			
Bromochloroacetic acid (bcaa)	11.0	1.0	ug/l	10.0	ND	110	70-130	4	30	
Dibromoacetic acid (dbaa)	10.8	1.0	ug/l	10.0	ND	108	70-130	4	30	
Dichloroacetic acid (dcaa)	11.7	1.0	ug/l	10.0	0.456	112	70-130	2	30	
Monobromoacetic acid (mbaa)	7.83	1.0	ug/l	10.0	ND	78	70-130	3	30	

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0077 - EPA 500 Series										
Matrix Spike Dup (W8G0077-MSD1)	**Source: 8070201-03**		Analyzed: 07/03/08							
Monochloroacetic acid (mcaa)	11.0	2.0	ug/l	10.0	ND	110	70-130	5	30	
Trichloroacetic acid (tcaa)	10.3	1.0	ug/l	10.0	ND	103	70-130	8	30	

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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0073 - EPA 200.2										
Blank (W8G0073-BLK1)				Analyzed: 07/02/08						
Calcium	ND	0.10	mg/l							
Magnesium	ND	0.10	mg/l							
Potassium	ND	0.10	mg/l							
Sodium	ND	0.50	mg/l							
Total Boron	ND	10	ug/l							
LCS (W8G0073-BS1)				Analyzed: 07/02/08						
Calcium	49.6	0.10	mg/l	50.2		99	85-115			
Magnesium	48.8	0.10	mg/l	50.2		97	85-115			
Potassium	52.0	0.10	mg/l	52.0		100	85-115			
Sodium	49.8	0.50	mg/l	50.2		99	85-115			
Total Boron	193	10	ug/l	200		96	85-115			
Matrix Spike (W8G0073-MS1)		**Source: 8061932-01**		Analyzed: 07/02/08						
Calcium	123	0.10	mg/l	50.2	74.5	96	70-130			
Magnesium	76.4	0.10	mg/l	50.2	27.4	98	70-130			
Potassium	55.8	0.10	mg/l	52.0	3.36	101	70-130			
Sodium	181	0.50	mg/l	50.2	133	94	70-130			
Total Boron	458	10	ug/l	200	261	99	70-130			
Matrix Spike (W8G0073-MS2)		**Source: 8070201-07**		Analyzed: 07/02/08						
Calcium	96.4	0.10	mg/l	50.2	50.2	92	70-130			
Magnesium	74.3	0.10	mg/l	50.2	27.5	93	70-130			
Potassium	68.7	0.10	mg/l	52.0	15.8	102	70-130			
Sodium	185	0.50	mg/l	50.2	135	99	70-130			
Total Boron	625	10	ug/l	200	441	92	70-130			
Matrix Spike Dup (W8G0073-MSD1)		**Source: 8061932-01**		Analyzed: 07/02/08						
Calcium	122	0.10	mg/l	50.2	74.5	94	70-130	0.9	30	
Magnesium	75.6	0.10	mg/l	50.2	27.4	96	70-130	1	30	
Potassium	55.9	0.10	mg/l	52.0	3.36	101	70-130	0.2	30	
Sodium	180	0.50	mg/l	50.2	133	94	70-130	0.1	30	
Total Boron	463	10	ug/l	200	261	101	70-130	1	30	

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Project ID: 27011-07-3200

Date Received: 07/01/08 09:30
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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0073 - EPA 200.2										
Matrix Spike Dup (W8G0073-MSD2)		**Source: 8070201-07**		Analyzed: 07/02/08						
Calcium	96.7	0.10	mg/l	50.2	50.2	93	70-130	0.3	30	
Magnesium	74.4	0.10	mg/l	50.2	27.5	93	70-130	0.2	30	
Potassium	66.6	0.10	mg/l	52.0	15.8	98	70-130	3	30	
Sodium	178	0.50	mg/l	50.2	135	86	70-130	4	30	
Total Boron	625	10	ug/l	200	441	92	70-130	0.02	30	

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Perchlorate by EPA 314.0 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0170 - EPA 314.0, dir. inj.										
Blank (W8G0170-BLK1)				Analyzed: 07/02/08						
Perchlorate	ND	2.0	ug/l							
LCS (W8G0170-BS1)				Analyzed: 07/02/08						
Perchlorate	20.3	2.0	ug/l	20.0		102	85-115			
Matrix Spike (W8G0170-MS1)		**Source: 8070201-04**		Analyzed: 07/02/08						
Perchlorate	15.9	2.0	ug/l	20.0	ND	80	80-120			MS-03
Matrix Spike Dup (W8G0170-MSD1)		**Source: 8070201-04**		Analyzed: 07/02/08						
Perchlorate	17.3	2.0	ug/l	20.0	ND	86	80-120	8	15	

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0098 - EPA 524.2										
Blank (W8G0098-BLK1)				Analyzed: 07/02/08						
Surrogate: 1,2-Dichlorobenzene-d4	*9.83*		*ug/l*	*10.0*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.68*		*ug/l*	*10.0*		*97*	*70-130*			
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
1,1-Dichloropropene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3 Dichloropropene (Total)	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	0.50	ug/l							
2-Butanone	ND	5.0	ug/l							
2-Chloroethyl vinyl ether	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
4-Methyl-2-pentanone	ND	5.0	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	0.50	ug/l							
Bromomethane	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0098 - EPA 524.2										
Blank (W8G0098-BLK1)				Analyzed: 07/02/08						
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	0.50	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l							
Di-isopropyl ether	ND	3.0	ug/l							
Ethyl tert-butyl ether	ND	3.0	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Freon 113	ND	5.0	ug/l							
Hexachlorobutadiene	ND	0.50	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
m,p-Xylene	ND	1.0	ug/l							
m-Dichlorobenzene	ND	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	3.0	ug/l							
Methylene chloride	ND	0.50	ug/l							
Naphthalene	ND	0.50	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
o-Dichlorobenzene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
p-Dichlorobenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
Tert-amyl methyl ether	ND	3.0	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8G0098 - EPA 524.2

Blank (W8G0098-BLK1) Analyzed: 07/02/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes (total)	ND	0.50	ug/l							

LCS (W8G0098-BS1) Analyzed: 07/02/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	*10.1*		*ug/l*	*10.0*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			
1,1,1,2-Tetrachloroethane	5.86	0.50	ug/l	6.00		98	70-130			
1,1,1-Trichloroethane	6.40	0.50	ug/l	6.00		107	70-130			
1,1,2,2-Tetrachloroethane	5.56	0.50	ug/l	6.00		93	70-130			
1,1,2-Trichloroethane	5.47	0.50	ug/l	6.00		91	70-130			
1,1-Dichloroethane	6.09	0.50	ug/l	6.00		102	70-130			
1,1-Dichloroethene	6.28	0.50	ug/l	6.00		105	70-130			
1,1-Dichloropropene	6.22	0.50	ug/l	6.00		104	70-130			
1,2,3-Trichlorobenzene	5.42	0.50	ug/l	6.00		90	70-130			
1,2,3-Trichloropropane	5.75	0.50	ug/l	6.00		96	70-130			
1,2,4-Trichlorobenzene	5.59	0.50	ug/l	6.00		93	70-130			
1,2,4-Trimethylbenzene	6.28	0.50	ug/l	6.00		105	70-130			
1,2-Dichloroethane	6.00	0.50	ug/l	6.00		100	70-130			
1,2-Dichloropropane	5.87	0.50	ug/l	6.00		98	70-130			
1,3,5-Trimethylbenzene	6.39	0.50	ug/l	6.00		106	70-130			
1,3-Dichloropropane	5.67	0.50	ug/l	6.00		94	70-130			
2,2-Dichloropropane	7.04	0.50	ug/l	6.00		117	70-130			
2-Butanone	5.74	5.0	ug/l	6.00		96	70-130			
2-Chloroethyl vinyl ether	5.06	1.0	ug/l	6.00		84	70-130			
2-Chlorotoluene	6.17	0.50	ug/l	6.00		103	70-130			
2-Hexanone	4.79	4.0	ug/l	6.00		80	70-130			
4-Chlorotoluene	6.06	0.50	ug/l	6.00		101	70-130			
4-Methyl-2-pentanone	5.28	5.0	ug/l	6.00		88	70-130			
Acetone	5.50	5.0	ug/l	6.00		92	70-130			
Benzene	5.98	0.50	ug/l	6.00		100	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8G0098 - EPA 524.2

LCS (W8G0098-BS1) Analyzed: 07/02/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Bromobenzene	5.94	0.50	ug/l	6.00		99	70-130			
Bromochloromethane	5.85	0.50	ug/l	6.00		98	70-130			
Bromodichloromethane	5.90	0.50	ug/l	6.00		98	70-130			
Bromoform	5.70	0.50	ug/l	6.00		95	70-130			
Bromomethane	6.05	0.50	ug/l	6.00		101	70-130			
Carbon Disulfide	6.25	0.50	ug/l	6.00		104	70-130			
Carbon tetrachloride	6.55	0.50	ug/l	6.00		109	70-130			
Chlorobenzene	5.92	0.50	ug/l	6.00		99	70-130			
Chloroethane	6.30	0.50	ug/l	6.00		105	70-130			
Chloroform	5.97	0.50	ug/l	6.00		100	70-130			
Chloromethane	6.34	0.50	ug/l	6.00		106	70-130			
cis-1,2-Dichloroethene	5.95	0.50	ug/l	6.00		99	70-130			
cis-1,3-Dichloropropene	5.79	0.50	ug/l	6.00		96	70-130			
Dibromochloromethane	5.68	0.50	ug/l	6.00		95	70-130			
Dibromomethane	5.65	0.50	ug/l	6.00		94	70-130			
Dichlorodifluoromethane (Freon 12)	6.43	0.50	ug/l	6.00		107	70-130			
Di-isopropyl ether	5.74	3.0	ug/l	6.00		96	70-130			
Ethyl tert-butyl ether	5.48	3.0	ug/l	6.00		91	70-130			
Ethylbenzene	6.28	0.50	ug/l	6.00		105	70-130			
Freon 113	6.56	5.0	ug/l	6.00		109	70-130			
Hexachlorobutadiene	6.33	0.50	ug/l	6.00		106	70-130			
Isopropylbenzene	6.33	0.50	ug/l	6.00		106	70-130			
m,p-Xylene	12.6	1.0	ug/l	12.0		105	70-130			
m-Dichlorobenzene	5.86	0.50	ug/l	6.00		98	70-130			
Methyl tert-butyl ether (MTBE)	5.39	3.0	ug/l	6.00		90	70-130			
Methylene chloride	5.68	0.50	ug/l	6.00		95	70-130			
Naphthalene	5.23	0.50	ug/l	6.00		87	70-130			
n-Butylbenzene	6.63	0.50	ug/l	6.00		110	70-130			
n-Propylbenzene	6.33	0.50	ug/l	6.00		106	70-130			
o-Dichlorobenzene	5.70	0.50	ug/l	6.00		95	70-130			
o-Xylene	6.08	0.50	ug/l	6.00		101	70-130			
p-Dichlorobenzene	5.81	0.50	ug/l	6.00		97	70-130			
p-Isopropyltoluene	6.50	0.50	ug/l	6.00		108	70-130			

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0098 - EPA 524.2										
LCS (W8G0098-BS1)				Analyzed: 07/02/08						
sec-Butylbenzene	6.44	0.50	ug/l	6.00		107	70-130			
Styrene	6.12	0.50	ug/l	6.00		102	70-130			
Tert-amyl methyl ether	5.50	3.0	ug/l	6.00		92	70-130			
tert-Butylbenzene	6.41	0.50	ug/l	6.00		107	70-130			
Tetrachloroethene	6.10	0.50	ug/l	6.00		102	70-130			
Toluene	6.04	0.50	ug/l	6.00		101	70-130			
trans-1,2-Dichloroethene	6.14	0.50	ug/l	6.00		102	70-130			
trans-1,3-Dichloropropene	5.78	0.50	ug/l	6.00		96	70-130			
Trichloroethene	6.12	0.50	ug/l	6.00		102	70-130			
Trichlorofluoromethane	6.64	5.0	ug/l	6.00		111	70-130			
Vinyl chloride	6.18	0.50	ug/l	6.00		103	70-130			
LCS Dup (W8G0098-BSD1)				Analyzed: 07/02/08						
Surrogate: 1,2-Dichlorobenzene-d4	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.1*		*ug/l*	*10.0*		*101*	*70-130*			
1,1,1,2-Tetrachloroethane	5.88	0.50	ug/l	6.00		98	70-130	0.3	30	
1,1,1-Trichloroethane	6.39	0.50	ug/l	6.00		106	70-130	0.2	30	
1,1,2,2-Tetrachloroethane	5.70	0.50	ug/l	6.00		95	70-130	2	30	
1,1,2-Trichloroethane	5.60	0.50	ug/l	6.00		93	70-130	2	30	
1,1-Dichloroethane	6.07	0.50	ug/l	6.00		101	70-130	0.3	30	
1,1-Dichloroethene	6.44	0.50	ug/l	6.00		107	70-130	3	30	
1,1-Dichloropropene	6.35	0.50	ug/l	6.00		106	70-130	2	30	
1,2,3-Trichlorobenzene	5.68	0.50	ug/l	6.00		95	70-130	5	30	
1,2,3-Trichloropropane	5.86	0.50	ug/l	6.00		98	70-130	2	30	
1,2,4-Trichlorobenzene	5.72	0.50	ug/l	6.00		95	70-130	2	30	
1,2,4-Trimethylbenzene	6.25	0.50	ug/l	6.00		104	70-130	0.5	30	
1,2-Dichloroethane	5.96	0.50	ug/l	6.00		99	70-130	0.7	30	
1,2-Dichloropropane	5.80	0.50	ug/l	6.00		97	70-130	1	30	
1,3,5-Trimethylbenzene	6.33	0.50	ug/l	6.00		106	70-130	0.9	30	
1,3-Dichloropropane	5.66	0.50	ug/l	6.00		94	70-130	0.2	30	
2,2-Dichloropropane	6.68	0.50	ug/l	6.00		111	70-130	5	30	
2-Butanone	5.66	5.0	ug/l	6.00		94	70-130	1	30	
2-Chloroethyl vinyl ether	5.31	1.0	ug/l	6.00		88	70-130	5	30	

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0098 - EPA 524.2										
LCS Dup (W8G0098-BSD1)				Analyzed: 07/02/08						
2-Chlorotoluene	6.14	0.50	ug/l	6.00		102	70-130	0.5	30	
2-Hexanone	5.13	4.0	ug/l	6.00		86	70-130	7	30	
4-Chlorotoluene	6.10	0.50	ug/l	6.00		102	70-130	0.7	30	
4-Methyl-2-pentanone	5.39	5.0	ug/l	6.00		90	70-130	2	30	
Acetone	5.33	5.0	ug/l	6.00		89	70-130	3	30	
Benzene	5.97	0.50	ug/l	6.00		100	70-130	0.2	30	
Bromobenzene	5.95	0.50	ug/l	6.00		99	70-130	0.2	30	
Bromochloromethane	5.59	0.50	ug/l	6.00		93	70-130	5	30	
Bromodichloromethane	5.92	0.50	ug/l	6.00		99	70-130	0.3	30	
Bromoform	5.81	0.50	ug/l	6.00		97	70-130	2	30	
Bromomethane	6.03	0.50	ug/l	6.00		100	70-130	0.3	30	
Carbon Disulfide	5.74	0.50	ug/l	6.00		96	70-130	9	30	
Carbon tetrachloride	6.58	0.50	ug/l	6.00		110	70-130	0.5	30	
Chlorobenzene	5.94	0.50	ug/l	6.00		99	70-130	0.3	30	
Chloroethane	6.30	0.50	ug/l	6.00		105	70-130	0	30	
Chloroform	5.91	0.50	ug/l	6.00		98	70-130	1	30	
Chloromethane	6.28	0.50	ug/l	6.00		105	70-130	1	30	
cis-1,2-Dichloroethene	5.99	0.50	ug/l	6.00		100	70-130	0.7	30	
cis-1,3-Dichloropropene	5.89	0.50	ug/l	6.00		98	70-130	2	30	
Dibromochloromethane	5.69	0.50	ug/l	6.00		95	70-130	0.2	30	
Dibromomethane	5.74	0.50	ug/l	6.00		96	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	6.49	0.50	ug/l	6.00		108	70-130	0.9	30	
Di-isopropyl ether	5.85	3.0	ug/l	6.00		98	70-130	2	30	
Ethyl tert-butyl ether	5.63	3.0	ug/l	6.00		94	70-130	3	30	
Ethylbenzene	6.27	0.50	ug/l	6.00		104	70-130	0.2	30	
Freon 113	6.16	5.0	ug/l	6.00		103	70-130	6	30	
Hexachlorobutadiene	6.42	0.50	ug/l	6.00		107	70-130	1	30	
Isopropylbenzene	6.37	0.50	ug/l	6.00		106	70-130	0.6	30	
m,p-Xylene	12.7	1.0	ug/l	12.0		106	70-130	0.6	30	
m-Dichlorobenzene	5.84	0.50	ug/l	6.00		97	70-130	0.3	30	
Methyl tert-butyl ether (MTBE)	5.50	3.0	ug/l	6.00		92	70-130	2	30	
Methylene chloride	5.72	0.50	ug/l	6.00		95	70-130	0.7	30	
Naphthalene	5.57	0.50	ug/l	6.00		93	70-130	6	30	

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0098 - EPA 524.2										
LCS Dup (W8G0098-BSD1)				Analyzed: 07/02/08						
n-Butylbenzene	6.66	0.50	ug/l	6.00		111	70-130	0.5	30	
n-Propylbenzene	6.36	0.50	ug/l	6.00		106	70-130	0.5	30	
o-Dichlorobenzene	5.71	0.50	ug/l	6.00		95	70-130	0.2	30	
o-Xylene	6.11	0.50	ug/l	6.00		102	70-130	0.5	30	
p-Dichlorobenzene	5.83	0.50	ug/l	6.00		97	70-130	0.3	30	
p-Isopropyltoluene	6.49	0.50	ug/l	6.00		108	70-130	0.2	30	
sec-Butylbenzene	6.51	0.50	ug/l	6.00		108	70-130	1	30	
Styrene	6.11	0.50	ug/l	6.00		102	70-130	0.2	30	
Tert-amyl methyl ether	5.59	3.0	ug/l	6.00		93	70-130	2	30	
tert-Butylbenzene	6.41	0.50	ug/l	6.00		107	70-130	0	30	
Tetrachloroethene	6.19	0.50	ug/l	6.00		103	70-130	1	30	
Toluene	6.05	0.50	ug/l	6.00		101	70-130	0.2	30	
trans-1,2-Dichloroethene	6.17	0.50	ug/l	6.00		103	70-130	0.5	30	
trans-1,3-Dichloropropene	5.86	0.50	ug/l	6.00		98	70-130	1	30	
Trichloroethene	6.08	0.50	ug/l	6.00		101	70-130	0.7	30	
Trichlorofluoromethane	6.72	5.0	ug/l	6.00		112	70-130	1	30	
Vinyl chloride	6.30	0.50	ug/l	6.00		105	70-130	2	30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8070201 Project ID: 27011-07-3200	Date Received: Date Reported:	07/01/08 09:30 07/18/08 10:38

Notes and Definitions

O-04	This analysis was performed outside the EPA recommended holding time.
MS-03	Multiple analyses indicate the percent recovery is out of acceptance limits due to a possible matrix effect.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

1 of 5

8070201

LOCUS TECHNOLOGIES CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test
SAMPLERS Vector (PRINT)
Susan Stewart (SIGN)
PROJECT NUMBER 27011-07-3200
RECORDER Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY
LAB PROJECT NO.

2 bottles

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL	Ascorbic HCl	Field Filtered (check)	ANALYSIS REQUESTED Bromodichloromethane	Bromoform	Chloroform	C. Tetrachloride	Dibromochlorometh	Xylenes Total	Addl 8260 VOCs			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/25	11:30	SCRWA B 2514F				A	G				X		X	X	X	X	X	X	X			1	14day		X			
2	"	"	SCRWA-B 2514F				A	G				X		X	X	X	X	X	X	X			1			X			
3	6/27	10:30	SO/SC 2514L				A	G				X		X	X	X	X	X	X	X			1			X			
4	"	"	SO/SC 2514L				A	G				X		X	X	X	X	X	X	X			1			X			
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature) Susan Stewart	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
OnTrac Courier	Ice chest		Susan Stewart	6/30/08		Jamie Gomez	7/1/08	9:30

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

4.8°C

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REV. 6/02

8070201 E- 250 ml plastic 2 of 5

LOCUS TECHNOLOGIES CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER Susan Stewart (SIGN)
SAMPLERS Vector (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250ml glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL	NH4Cl	Field Filtered (check)	ANALYSIS REQUESTED Bromochloro Acetic Acid	Dibromo "	Dichloro "	Mono Bromo "	Mono Chloro "	Trichloro "	Perchlorate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/25	11:30	SCRWA-B 2514F				F	G				X		X	X	X	X	X	X				1	14day					
2	"	"	" "				G	G												X			1	28day					
3	6/27	10:30	SJ/SC 2514L				F	G				X		X	X	X	X	X	X				1	14day					
4	6/27	10:30	SJ/SC 2514C				G	G												X			1	28day					
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
Sampled by Vector Eng

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Icechest		Susan Stewart	6/30/08		Jaime Gomez	7/1/08	930

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ OTHER ______ TEL ______ FAX ______

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8070201

3 of 5

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ______ (SIGN)
SAMPLERS Vector (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 125ml glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	H_3PO_4	HCL	NaOH	Field Filtered (check)	ANALYSIS REQUESTED Cyanide	Alkalinity, total	Bicarbonate alk	DOC	TOC					TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/27	10:30	SJ/SC 2514L				C	G				X		X									1	14d					
2							C	G	X						X	X							1	"					
3							F	G									X						1	28d					
4	↓	↓	↓ ↓				F	G		X								X					1	"					
5	6/27	11:30	SCRWA-B 2514F				C	G				X		X									1	14d					
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
Sampled by Vector Eng.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Ice chest		Susan Stewart	6/30/08		Jana Gomez	7/1/08	9:30

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ OTHER ______ TEL ______ FAX ______

4.8°c

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8070201

4 of 5

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test

PROJECT NUMBER 27011-07-3200

RECORDER ______ (SIGN)

SAMPLERS Vector (PRINT)

Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250 mL plastic

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY

LAB PROJECT NO. ______

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION				ANALYSIS REQUESTED															
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	Field Filtered (check)	Boron	Calcium	Magnesium	Sodium	pottasium					TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/30	8:30	GJ/SC-1 2514L				F	G		X			X	X	X	X	X					1	180d					
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS

Sampled by Vector Eng.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Ice chest		Susan Stewart	6/30/08			7/1/08	9:30

Send Lab Results to (Name): Norman Wong (Check Office Below)

Verbals Requested: Yes ☐ No ☐

4.8°C

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

8070201

5 of 5

PROJECT NAME Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ______ (SIGN)

SAMPLERS Vector (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 125-ml plastic

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL	Field Filtered (check)	ANALYSIS REQUESTED Sulfate	Nitrite	Nitrate	Chloride	Bromide					TAT Requested (enter code)	Maximum Holding Time for Method Requested 48hr	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/30	8:30	SJ/SC-1 2514L				F	G	X				X	X	X	X	X					1	2d					
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
OnTrac Courier	Icechest		Susan Stewart	6/30/08		Jaime Gomez	7/1/08	9:30

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ OTHER ______ TEL ______ FAX ______

4.8°C

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info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client:	Locus Technologies 299 Fairchild Drive Mountain View, CA 94043 Attention: Norman Wong	**Report Date:**	07/18/08 10:37
		Received Date:	06/26/08 10:30
		Turn Around:	Normal
		Work Order #:	8062667
	Phone: (650) 641-8258		
	Fax: (650) 960-0739	**Client Project:**	Recycled Water Bench Test

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Norman Wong :

Enclosed are the results of analyses for samples received 06/26/08 10:30 with the Chain of Custody document. The samples were received in good condition. The samples were received at 2.7 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Hai Van Nguyen
Project Manager

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062667
Project ID: Recycled Water Bench Test

Date Received: 06/26/08 10:30
Date Reported: 07/18/08 10:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
SCRWA 1 2514N	Vector Engineering		8062667-01	Water	06/24/08 16:00
SCRWA-1 2514N	Vector Engineering		8062667-02	Water	06/24/08 16:00
SCRWA-B 2514F	Vector Engineering		8062667-03	Water	06/23/08 15:00
DI-1 2514P	Vector Engineering		8062667-04	Water	06/24/08 17:00
SCRWA-B 2514F	Vector Engineering		8062667-05	Water	06/23/08 15:00
DI-1 2514P	Vector Engineering		8062667-06	Water	06/24/08 17:00
DI-1 2514P	Vector Engineering		8062667-07	Water	06/24/08 17:00
SCRWA-1 2514N	Vector Engineering		8062667-08	Water	06/24/08 16:00
SCRWA 1 2514N	Vector Engineering		8062667-11	Water	06/24/08 16:00
DI-1 2514P	Vector Engineering		8062667-12	Water	06/24/08 17:00
SCRWA-B 2514F	Vector Engineering		8062667-13	Water	06/23/08 15:00
SCRWA-1 2514N	Vector Engineering		8062667-14	Water	06/24/08 16:00
DI-1 2514P	Vector Engineering		8062667-15	Water	06/24/08 17:00
SCRWA-1 2514N	Vector Engineering		8062667-16	Water	06/24/08 16:00
DI-1 2514P	Vector Engineering		8062667-17	Water	06/24/08 17:00
DI-1 2514P	Vector Engineering		8062667-18	Water	06/24/08 17:00
SCRWA-1 2514N	Vector Engineering		8062667-19	Water	06/24/08 16:00
SCRWA-B 2514F	Vector Engineering		8062667-20	Water	06/23/08 16:00
SCRWA-B 2514F	Vector Engineering		8062667-21	Water	06/24/08 11:00
DI-1 2514P	Vector Engineering		8062667-22	Water	06/24/08 17:00
SCRWA-1 2514N	Vector Engineering		8062667-23	Water	06/24/08 16:00
DI-1 2514P	Vector Engineering		8062667-24	Water	06/24/08 17:00
SCRWA-1 2514N	Vector Engineering		8062667-25	Water	06/24/08 18:00

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062667 Project ID: Recycled Water Bench Test	Date Received: Date Reported:	06/26/08 10:30 07/18/08 10:37

SCRWA 1 2514N 8062667-01 (Water) Date 06/24/08 16:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	240	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Bicarbonate Alkalinity as HCO3	290	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	

SCRWA-1 2514N 8062667-02 (Water) Date 06/24/08 16:00

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	360	ug/l	10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Calcium	46	mg/l	0.10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Potassium	27	mg/l	0.10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Magnesium	27	mg/l	0.10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Sodium	140	mg/l	0.50	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	

SCRWA-B 2514F 8062667-03 (Water) Date 06/23/08 15:00

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	400	ug/l	10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Calcium	51	mg/l	0.10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Potassium	1.1	mg/l	0.10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Magnesium	32	mg/l	0.10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Sodium	140	mg/l	0.50	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	

DI-1 2514P 8062667-04 (Water) Date 06/24/08 17:00

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	ND	ug/l	10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Calcium	ND	mg/l	0.10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Potassium	0.29	mg/l	0.10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	

DI-1 2514P 8062667-04 (Water) **Date** **06/24/08 17:00**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Magnesium	ND	mg/l	0.10	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	
Sodium	ND	mg/l	0.50	1	EPA 200.7	W8F1077	06/29/08	07/03/08	jba	

SCRWA-B 2514F 8062667-05 (Water) **Date** **06/23/08 15:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**220**	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Bicarbonate Alkalinity as HCO3	**270**	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	

DI-1 2514P 8062667-06 (Water) **Date** **06/24/08 17:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Bicarbonate Alkalinity as HCO3	ND	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0087	07/02/08	07/02/08	png	

DI-1 2514P 8062667-07 (Water) **Date** **06/24/08 17:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8G0094	07/02/08	07/02/08	hml	

SCRWA-1 2514N 8062667-08 (Water) **Date** **06/24/08 16:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8G0094	07/02/08	07/02/08	hml	

SCRWA 1 2514N 8062667-11 (Water) Date 06/24/08 16:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	
Chloride	230	mg/l	5.0	10	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	
Nitrate as N	3400	ug/l	110	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	
Sulfate as SO4	81	mg/l	2.5	5	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	

DI-1 2514P 8062667-12 (Water) Date 06/24/08 17:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	
Chloride	ND	mg/l	0.50	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	
Nitrate as N	ND	ug/l	110	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	
Sulfate as SO4	ND	mg/l	0.50	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	

SCRWA-B 2514F 8062667-13 (Water) Date 06/23/08 15:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	
Chloride	200	mg/l	2.5	5	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	O-04
Nitrate as N	2700	ug/l	110	1	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	O-04
Sulfate as SO4	89	mg/l	2.5	5	EPA 300.0	W8F1191	06/26/08	06/26/08	mac	

SCRWA-1 2514N 8062667-14 (Water) Date 06/24/08 16:00

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8G0097	07/01/08	07/01/08	mac	

DI-1 2514P 8062667-15 (Water) Date 06/24/08 17:00

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062667 Project ID: Recycled Water Bench Test	Date Received: Date Reported:	06/26/08 10:30 07/18/08 10:37

DI-1 2514P 8062667-15 (Water) Date 06/24/08 17:00

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8G0097	07/01/08	07/01/08	mac	

SCRWA-1 2514N 8062667-16 (Water) Date 06/24/08 16:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dissolved Organic Carbon	4.1	mg/l	0.30	1	SM5310C	W8G0083	07/02/08	07/02/08	jlp	

DI-1 2514P 8062667-17 (Water) Date 06/24/08 17:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dissolved Organic Carbon	ND	mg/l	0.30	1	SM5310C	W8G0083	07/02/08	07/02/08	jlp	

DI-1 2514P 8062667-18 (Water) Date 06/24/08 17:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Organic Carbon (TOC)	ND	mg/l	0.30	1	SM5310C	W8G0046	07/01/08	07/01/08	jlp	

SCRWA-1 2514N 8062667-19 (Water) Date 06/24/08 16:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Organic Carbon (TOC)	4.2	mg/l	0.30	1	SM5310C	W8G0046	07/01/08	07/01/08	jlp	

SCRWA-B 2514F 8062667-20 (Water) Date 06/23/08 16:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dissolved Organic Carbon	3.5	mg/l	0.30	1	SM5310C	W8G0083	07/02/08	07/02/08	jlp	

SCRWA-B 2514F 8062667-21 (Water) Date 06/24/08 11:00

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062667
Project ID: Recycled Water Bench Test

Date Received: 06/26/08 10:30
Date Reported: 07/18/08 10:37

SCRWA-B 2514F 8062667-21 (Water) Date 06/24/08 11:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Organic Carbon (TOC)	4.3	mg/l	0.30	1	SM5310C	W8G0046	07/01/08	07/01/08	jlp	

DI-1 2514P 8062667-22 (Water) Date 06/24/08 17:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062667
Project ID: Recycled Water Bench Test

Date Received: 06/26/08 10:30
Date Reported: 07/18/08 10:37

DI-1 2514P 8062667-22 (Water) Date **06/24/08 17:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062667 Project ID: Recycled Water Bench Test	Date Received: 06/26/08 10:30 Date Reported: 07/18/08 10:37

DI-1 2514P 8062667-22 (Water) Date 06/24/08 17:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	98	%	*70-130*		*EPA 524.2*	*W8F1206*	*06/27/08*	*06/27/08*	mdt	
Surrogate: 4-Bromofluorobenzene	97	%	*70-130*		*EPA 524.2*	*W8F1206*	*06/27/08*	*06/27/08*	mdt	

SCRWA-1 2514N 8062667-23 (Water) Date 06/24/08 16:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062667 Project ID: Recycled Water Bench Test	Date Received: 06/26/08 10:30 Date Reported: 07/18/08 10:37

SCRWA-1 2514N 8062667-23 (Water) **Date** **06/24/08 16:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Bromodichloromethane	**12**	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Chloroform	**40**	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Dibromochloromethane	**2.6**	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062667 Project ID: Recycled Water Bench Test	Date Received: 06/26/08 10:30 Date Reported: 07/18/08 10:37

SCRWA-1 2514N 8062667-23 (Water) Date 06/24/08 16:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F1206	06/27/08	06/27/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	98	%	*70-130*		*EPA 524.2*	*W8F1206*	*06/27/08*	*06/27/08*	mdt	
Surrogate: 4-Bromofluorobenzene	97	%	*70-130*		*EPA 524.2*	*W8F1206*	*06/27/08*	*06/27/08*	mdt	

DI-1 2514P 8062667-24 (Water) Date 06/24/08 17:00

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DI-1 2514P 8062667-24 (Water) **Date** **06/24/08 17:00**

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	97	%	*70-130*		*EPA 552.2*	*W8F1145*	*06/27/08*	*06/28/08*	cwn	

SCRWA-1 2514N 8062667-25 (Water) **Date** **06/24/08 18:00**

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F1145	06/27/08	06/28/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	107	%	*70-130*		*EPA 552.2*	*W8F1145*	*06/27/08*	*06/28/08*	cwn	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062667
Project ID: Recycled Water Bench Test

Date Received: 06/26/08 10:30
Date Reported: 07/18/08 10:37

QUALITY CONTROL SECTION

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1191 - EPA 300.0/300.1										
Blank (W8F1191-BLK1)				Analyzed: 06/26/08						
Bromide	ND	0.50	mg/l							
Chloride	ND	0.50	mg/l							
Nitrate as N	ND	110	ug/l							
Nitrite as N	ND	150	ug/l							
Sulfate as SO4	ND	0.50	mg/l							
LCS (W8F1191-BS1)				Analyzed: 06/26/08						
Bromide	8.77	0.50	mg/l	8.00		110	90-110			
Chloride	4.26	0.50	mg/l	4.00		106	90-110			
Nitrate as N	1860	110	ug/l	1810		103	90-110			
Nitrite as N	608	150	ug/l	608		100	90-110			
Sulfate as SO4	8.17	0.50	mg/l	8.00		102	90-110			
Matrix Spike (W8F1191-MS1)	**Source: 8062027-01**			Analyzed: 06/26/08						
Bromide	87.0	5.0	mg/l	80.0	1.13	107	83-113			
Chloride	235	5.0	mg/l	40.0	192	107	72-118			
Nitrate as N	18300	1100	ug/l	18100	ND	101	80-107			
Nitrite as N	5830	1500	ug/l	6080	ND	96	86-111			
Sulfate as SO4	272	5.0	mg/l	80.0	195	96	84-114			
Matrix Spike (W8F1191-MS2)	**Source: 8062027-03**			Analyzed: 06/26/08						
Bromide	87.0	5.0	mg/l	80.0	1.19	107	83-113			
Chloride	246	5.0	mg/l	40.0	199	118	72-118			
Nitrate as N	18300	1100	ug/l	18100	ND	101	80-107			
Nitrite as N	5780	1500	ug/l	6080	ND	95	86-111			
Sulfate as SO4	126	5.0	mg/l	80.0	45.4	100	84-114			
Matrix Spike Dup (W8F1191-MSD1)	**Source: 8062027-01**			Analyzed: 06/26/08						
Bromide	87.3	5.0	mg/l	80.0	1.13	108	83-113	0.4	20	
Chloride	232	5.0	mg/l	40.0	192	99	72-118	1	20	
Nitrate as N	18400	1100	ug/l	18100	ND	102	80-107	0.2	20	
Nitrite as N	5790	1500	ug/l	6080	ND	95	86-111	0.7	20	
Sulfate as SO4	269	5.0	mg/l	80.0	195	92	84-114	1	20	

Anions by EPA Method 300.0/300.1/326 - Quality Control

Batch W8F1191 - EPA 300.0/300.1

Matrix Spike Dup (W8F1191-MSD2) Source: 8062027-03 Analyzed: 06/26/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Bromide	87.3	5.0	mg/l	80.0	1.19	108	83-113	0.3	20	
Chloride	241	5.0	mg/l	40.0	199	106	72-118	2	20	
Nitrate as N	18400	1100	ug/l	18100	ND	102	80-107	0.2	20	
Nitrite as N	5800	1500	ug/l	6080	ND	95	86-111	0.3	20	
Sulfate as SO4	125	5.0	mg/l	80.0	45.4	100	84-114	0.4	20	

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0046 - SM5310										
Blank (W8G0046-BLK1)				Analyzed: 07/01/08						
Total Organic Carbon (TOC)	ND	0.30	mg/l							
LCS (W8G0046-BS1)				Analyzed: 07/01/08						
Total Organic Carbon (TOC)	4.82	0.30	mg/l	5.00		96	90-110			
Matrix Spike (W8G0046-MS1)		**Source: 8062667-18**		Analyzed: 07/01/08						
Total Organic Carbon (TOC)	4.67	0.30	mg/l	5.00	0.131	91	84-107			
Matrix Spike Dup (W8G0046-MSD1)		**Source: 8062667-18**		Analyzed: 07/01/08						
Total Organic Carbon (TOC)	4.65	0.30	mg/l	5.00	0.131	90	84-107	0.6	20	
Batch W8G0083 - SM5310										
Blank (W8G0083-BLK1)				Analyzed: 07/02/08						
Dissolved Organic Carbon	ND	0.30	mg/l							
LCS (W8G0083-BS1)				Analyzed: 07/02/08						
Dissolved Organic Carbon	4.79	0.30	mg/l	5.00		96	80-120			
LCS Dup (W8G0083-BSD1)				Analyzed: 07/02/08						
Dissolved Organic Carbon	4.80	0.30	mg/l	5.00		96	80-120	0.2	20	
Batch W8G0087 - General Preparation										
Blank (W8G0087-BLK1)				Analyzed: 07/02/08						
Alkalinity as CaCO3	ND	2.0	mg/l							
Bicarbonate Alkalinity as HCO3	ND	2.0	mg/l							
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l							
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l							

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0087 - General Preparation										
LCS (W8G0087-BS1)				Analyzed: 07/02/08						
Alkalinity as CaCO3	44.2	2.0	mg/l	45.3		98	94-108			
Bicarbonate Alkalinity as HCO3	53.9	2.0	mg/l	55.3		98	94-108			
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Duplicate (W8G0087-DUP1)		**Source: 8070201-05**		Analyzed: 07/02/08						
Alkalinity as CaCO3	161	2.0	mg/l		165			2	15	
Bicarbonate Alkalinity as HCO3	196	2.0	mg/l		201			2	15	
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Batch W8G0094 - General Preparation										
Blank (W8G0094-BLK1)				Analyzed: 07/02/08						
Total Cyanide	ND	5.0	ug/l							
LCS (W8G0094-BS1)				Analyzed: 07/02/08						
Total Cyanide	50.0	5.0	ug/l	50.0		100	90-110			
Matrix Spike (W8G0094-MS1)		**Source: 8062667-07**		Analyzed: 07/02/08						
Total Cyanide	43.4	5.0	ug/l	50.0	ND	87	90-110			MS-01
Matrix Spike Dup (W8G0094-MSD1)		**Source: 8062667-07**		Analyzed: 07/02/08						
Total Cyanide	43.1	5.0	ug/l	50.0	ND	86	90-110	0.7	20	MS-01

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1145 - EPA 500 Series										
Blank (W8F1145-BLK1)				Analyzed: 07/01/08						
Surrogate: 2,3-Dibromopropionic acid	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			
Bromochloroacetic acid (bcaa)	ND	1.0	ug/l							
Dibromoacetic acid (dbaa)	ND	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	2.0	ug/l							
Total HAA5	ND	5.0	ug/l							
Trichloroacetic acid (tcaa)	ND	1.0	ug/l							
LCS (W8F1145-BS1)				Analyzed: 07/01/08						
Surrogate: 2,3-Dibromopropionic acid	*11.1*		*ug/l*	*10.0*		*111*	*70-130*			
Bromochloroacetic acid (bcaa)	10.1	1.0	ug/l	10.0		101	70-130			
Dibromoacetic acid (dbaa)	10.0	1.0	ug/l	10.0		100	70-130			
Dichloroacetic acid (dcaa)	11.0	1.0	ug/l	10.0		110	70-130			
Monobromoacetic acid (mbaa)	9.12	1.0	ug/l	10.0		91	70-130			
Monochloroacetic acid (mcaa)	8.39	2.0	ug/l	10.0		84	70-130			
Trichloroacetic acid (tcaa)	10.5	1.0	ug/l	10.0		105	70-130			
Matrix Spike (W8F1145-MS1)	**Source: 8062013-11**			Analyzed: 06/27/08						
Surrogate: 2,3-Dibromopropionic acid	*10.4*		*ug/l*	*10.0*		*104*	*70-130*			
Bromochloroacetic acid (bcaa)	16.6	1.0	ug/l	10.0	6.81	98	70-130			
Dibromoacetic acid (dbaa)	14.2	1.0	ug/l	10.0	4.55	97	70-130			
Dichloroacetic acid (dcaa)	26.9	1.0	ug/l	10.0	16.0	109	70-130			
Monobromoacetic acid (mbaa)	10.7	1.0	ug/l	10.0	ND	107	70-130			
Monochloroacetic acid (mcaa)	5.04	2.0	ug/l	10.0	ND	50	70-130			MS-05
Trichloroacetic acid (tcaa)	23.4	1.0	ug/l	10.0	13.4	100	70-130			
Matrix Spike (W8F1145-MS2)	**Source: 8062649-01**			Analyzed: 06/27/08						
Surrogate: 2,3-Dibromopropionic acid	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
Bromochloroacetic acid (bcaa)	12.2	1.0	ug/l	10.0	1.73	105	70-130			
Dibromoacetic acid (dbaa)	17.8	1.0	ug/l	10.0	7.96	99	70-130			
Dichloroacetic acid (dcaa)	9.50	1.0	ug/l	10.0	ND	95	70-130			
Monobromoacetic acid (mbaa)	10.4	1.0	ug/l	10.0	ND	104	70-130			

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1145 - EPA 500 Series										
Matrix Spike (W8F1145-MS2)	**Source: 8062649-01**			Analyzed: 06/27/08						
Monochloroacetic acid (mcaa)	9.04	2.0	ug/l	10.0	ND	90	70-130			
Trichloroacetic acid (tcaa)	10.4	1.0	ug/l	10.0	ND	104	70-130			
Matrix Spike Dup (W8F1145-MSD1)	**Source: 8062013-11**			Analyzed: 06/27/08						
Surrogate: 2,3-Dibromopropionic acid	*10.2*		*ug/l*	*10.0*		*102*	*70-130*			
Bromochloroacetic acid (bcaa)	16.4	1.0	ug/l	10.0	6.81	96	70-130	1	30	
Dibromoacetic acid (dbaa)	14.1	1.0	ug/l	10.0	4.55	95	70-130	1	30	
Dichloroacetic acid (dcaa)	26.4	1.0	ug/l	10.0	16.0	104	70-130	2	30	
Monobromoacetic acid (mbaa)	10.2	1.0	ug/l	10.0	ND	102	70-130	4	30	
Monochloroacetic acid (mcaa)	4.12	2.0	ug/l	10.0	ND	41	70-130	20	30	MS-05
Trichloroacetic acid (tcaa)	23.5	1.0	ug/l	10.0	13.4	101	70-130	0.4	30	
Matrix Spike Dup (W8F1145-MSD2)	**Source: 8062649-01**			Analyzed: 06/27/08						
Surrogate: 2,3-Dibromopropionic acid	*11.0*		*ug/l*	*10.0*		*110*	*70-130*			
Bromochloroacetic acid (bcaa)	12.8	1.0	ug/l	10.0	1.73	111	70-130	5	30	
Dibromoacetic acid (dbaa)	18.6	1.0	ug/l	10.0	7.96	106	70-130	4	30	
Dichloroacetic acid (dcaa)	9.93	1.0	ug/l	10.0	ND	99	70-130	4	30	
Monobromoacetic acid (mbaa)	10.7	1.0	ug/l	10.0	ND	107	70-130	3	30	
Monochloroacetic acid (mcaa)	9.58	2.0	ug/l	10.0	ND	96	70-130	6	30	
Trichloroacetic acid (tcaa)	11.1	1.0	ug/l	10.0	ND	111	70-130	6	30	

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Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1077 - EPA 200.2										
Blank (W8F1077-BLK1)				Analyzed: 07/03/08						
Calcium	ND	1.0	mg/l							
Magnesium	ND	0.20	mg/l							
Potassium	ND	1.0	mg/l							
Sodium	ND	1.0	mg/l							
Total Boron	ND	10	ug/l							
LCS (W8F1077-BS1)				Analyzed: 07/03/08						
Calcium	48.5	1.0	mg/l	50.2		97	85-115			
Magnesium	48.1	0.20	mg/l	50.2		96	85-115			
Potassium	50.6	1.0	mg/l	52.0		97	85-115			
Sodium	47.4	1.0	mg/l	50.2		94	85-115			
Total Boron	199	10	ug/l	200		99	85-115			
Matrix Spike (W8F1077-MS1)		**Source: 8062415-10**		Analyzed: 07/03/08						
Calcium	191	1.0	mg/l	100	102	88	70-130			
Magnesium	185	0.20	mg/l	100	94.1	90	70-130			
Potassium	117	1.0	mg/l	104	16.2	97	70-130			
Sodium	244	1.0	mg/l	100	158	86	70-130			
Total Boron	886	10	ug/l	400	509	94	70-130			
Matrix Spike (W8F1077-MS2)		**Source: 8062667-04**		Analyzed: 07/03/08						
Calcium	46.0	1.0	mg/l	50.2	0.0188	92	70-130			
Magnesium	45.4	0.20	mg/l	50.2	ND	90	70-130			
Potassium	48.8	1.0	mg/l	52.0	0.290	93	70-130			
Sodium	45.4	1.0	mg/l	50.2	0.379	90	70-130			
Total Boron	190	10	ug/l	200	ND	95	70-130			
Matrix Spike Dup (W8F1077-MSD1)		**Source: 8062415-10**		Analyzed: 07/03/08						
Calcium	195	1.0	mg/l	100	102	92	70-130	2	30	
Magnesium	186	0.20	mg/l	100	94.1	92	70-130	0.7	30	
Potassium	120	1.0	mg/l	104	16.2	100	70-130	3	30	
Sodium	247	1.0	mg/l	100	158	89	70-130	1	30	
Total Boron	890	10	ug/l	400	509	95	70-130	0.4	30	

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Metals by EPA 200 Series Methods - Quality Control

Batch W8F1077 - EPA 200.2

Matrix Spike Dup (W8F1077-MSD2) **Source: 8062667-04** Analyzed: 07/03/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Calcium	46.2	1.0	mg/l	50.2	0.0188	92	70-130	0.4	30	
Magnesium	45.6	0.20	mg/l	50.2	ND	91	70-130	0.5	30	
Potassium	49.4	1.0	mg/l	52.0	0.290	94	70-130	1	30	
Sodium	47.3	1.0	mg/l	50.2	0.379	93	70-130	4	30	
Total Boron	188	10	ug/l	200	ND	94	70-130	0.9	30	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062667
Project ID: Recycled Water Bench Test

Date Received: 06/26/08 10:30
Date Reported: 07/18/08 10:37

Perchlorate by EPA 314.0 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0097 - EPA 314.0, dir. inj.										
Blank (W8G0097-BLK1)				Analyzed: 07/01/08						
Perchlorate	ND	2.0	ug/l							
LCS (W8G0097-BS1)				Analyzed: 07/01/08						
Perchlorate	19.8	2.0	ug/l	20.0		99	85-115			
Matrix Spike (W8G0097-MS1)		**Source: 8062812-04**		Analyzed: 07/01/08						
Perchlorate	17.5	2.0	ug/l	20.0	ND	88	80-120			
Matrix Spike Dup (W8G0097-MSD1)		**Source: 8062812-04**		Analyzed: 07/01/08						
Perchlorate	17.3	2.0	ug/l	20.0	ND	87	80-120	1	15	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062667
Project ID: Recycled Water Bench Test

Date Received: 06/26/08 10:30
Date Reported: 07/18/08 10:37

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1206 - EPA 524.2										
Blank (W8F1206-BLK1)				Analyzed: 06/27/08						
Surrogate: 1,2-Dichlorobenzene-d4	*9.69*		*ug/l*	*10.0*		*97*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.58*		*ug/l*	*10.0*		*96*	*70-130*			
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
1,1-Dichloropropene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3 Dichloropropene (Total)	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	0.50	ug/l							
2-Butanone	ND	5.0	ug/l							
2-Chloroethyl vinyl ether	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
4-Methyl-2-pentanone	ND	5.0	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	0.50	ug/l							
Bromomethane	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1206 - EPA 524.2										
Blank (W8F1206-BLK1)				Analyzed: 06/27/08						
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	0.50	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l							
Di-isopropyl ether	ND	3.0	ug/l							
Ethyl tert-butyl ether	ND	3.0	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Freon 113	ND	5.0	ug/l							
Hexachlorobutadiene	ND	0.50	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
m,p-Xylene	ND	1.0	ug/l							
m-Dichlorobenzene	ND	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	3.0	ug/l							
Methylene chloride	ND	0.50	ug/l							
Naphthalene	ND	0.50	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
o-Dichlorobenzene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
p-Dichlorobenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
Tert-amyl methyl ether	ND	3.0	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F1206 - EPA 524.2

Blank (W8F1206-BLK1) Analyzed: 06/27/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes (total)	ND	0.50	ug/l							

LCS (W8F1206-BS1) Analyzed: 06/27/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.96*		*ug/l*	*10.0*		*100*	*70-130*			
1,1,1,2-Tetrachloroethane	5.69	0.50	ug/l	6.00		95	70-130			
1,1,1-Trichloroethane	5.83	0.50	ug/l	6.00		97	70-130			
1,1,2,2-Tetrachloroethane	5.45	0.50	ug/l	6.00		91	70-130			
1,1,2-Trichloroethane	5.39	0.50	ug/l	6.00		90	70-130			
1,1-Dichloroethane	5.51	0.50	ug/l	6.00		92	70-130			
1,1-Dichloroethene	5.59	0.50	ug/l	6.00		93	70-130			
1,1-Dichloropropene	5.86	0.50	ug/l	6.00		98	70-130			
1,2,3-Trichlorobenzene	5.89	0.50	ug/l	6.00		98	70-130			
1,2,3-Trichloropropane	5.55	0.50	ug/l	6.00		92	70-130			
1,2,4-Trichlorobenzene	5.84	0.50	ug/l	6.00		97	70-130			
1,2,4-Trimethylbenzene	6.00	0.50	ug/l	6.00		100	70-130			
1,2-Dichloroethane	5.25	0.50	ug/l	6.00		88	70-130			
1,2-Dichloropropane	5.40	0.50	ug/l	6.00		90	70-130			
1,3,5-Trimethylbenzene	6.08	0.50	ug/l	6.00		101	70-130			
1,3-Dichloropropane	5.40	0.50	ug/l	6.00		90	70-130			
2,2-Dichloropropane	6.88	0.50	ug/l	6.00		115	70-130			
2-Butanone	4.66	4.0	ug/l	6.00		78	70-130			
2-Chloroethyl vinyl ether	5.25	1.0	ug/l	6.00		88	70-130			
2-Chlorotoluene	5.79	0.50	ug/l	6.00		96	70-130			
2-Hexanone	5.03	5.0	ug/l	6.00		84	70-130			
4-Chlorotoluene	5.80	0.50	ug/l	6.00		97	70-130			
4-Methyl-2-pentanone	5.15	5.0	ug/l	6.00		86	70-130			
Acetone	4.26	4.0	ug/l	6.00		71	70-130			
Benzene	5.61	0.50	ug/l	6.00		94	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F1206 - EPA 524.2

LCS (W8F1206-BS1) Analyzed: 06/27/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Bromobenzene	5.55	0.50	ug/l	6.00		92	70-130			
Bromochloromethane	5.41	0.50	ug/l	6.00		90	70-130			
Bromodichloromethane	5.59	0.50	ug/l	6.00		93	70-130			
Bromoform	5.64	0.50	ug/l	6.00		94	70-130			
Bromomethane	5.99	0.50	ug/l	6.00		100	70-130			
Carbon Disulfide	5.51	0.50	ug/l	6.00		92	70-130			
Carbon tetrachloride	6.11	0.50	ug/l	6.00		102	70-130			
Chlorobenzene	5.75	0.50	ug/l	6.00		96	70-130			
Chloroethane	5.42	0.50	ug/l	6.00		90	70-130			
Chloroform	5.60	0.50	ug/l	6.00		93	70-130			
Chloromethane	4.97	0.50	ug/l	6.00		83	70-130			
cis-1,2-Dichloroethene	5.48	0.50	ug/l	6.00		91	70-130			
cis-1,3-Dichloropropene	5.66	0.50	ug/l	6.00		94	70-130			
Dibromochloromethane	5.50	0.50	ug/l	6.00		92	70-130			
Dibromomethane	5.42	0.50	ug/l	6.00		90	70-130			
Dichlorodifluoromethane (Freon 12)	4.73	0.50	ug/l	6.00		79	70-130			
Di-isopropyl ether	5.45	3.0	ug/l	6.00		91	70-130			
Ethyl tert-butyl ether	5.28	3.0	ug/l	6.00		88	70-130			
Ethylbenzene	6.00	0.50	ug/l	6.00		100	70-130			
Freon 113	5.61	5.0	ug/l	6.00		94	70-130			
Hexachlorobutadiene	6.24	0.50	ug/l	6.00		104	70-130			
Isopropylbenzene	6.17	0.50	ug/l	6.00		103	70-130			
m,p-Xylene	12.0	1.0	ug/l	12.0		100	70-130			
m-Dichlorobenzene	5.62	0.50	ug/l	6.00		94	70-130			
Methyl tert-butyl ether (MTBE)	5.38	3.0	ug/l	6.00		90	70-130			
Methylene chloride	5.36	0.50	ug/l	6.00		89	70-130			
Naphthalene	5.83	0.50	ug/l	6.00		97	70-130			
n-Butylbenzene	6.24	0.50	ug/l	6.00		104	70-130			
n-Propylbenzene	5.97	0.50	ug/l	6.00		100	70-130			
o-Dichlorobenzene	5.48	0.50	ug/l	6.00		91	70-130			
o-Xylene	5.91	0.50	ug/l	6.00		98	70-130			
p-Dichlorobenzene	5.60	0.50	ug/l	6.00		93	70-130			
p-Isopropyltoluene	6.27	0.50	ug/l	6.00		104	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1206 - EPA 524.2										
LCS (W8F1206-BS1)				Analyzed: 06/27/08						
sec-Butylbenzene	6.19	0.50	ug/l	6.00		103	70-130			
Styrene	5.95	0.50	ug/l	6.00		99	70-130			
Tert-amyl methyl ether	5.34	3.0	ug/l	6.00		89	70-130			
tert-Butylbenzene	6.17	0.50	ug/l	6.00		103	70-130			
Tetrachloroethene	5.78	0.50	ug/l	6.00		96	70-130			
Toluene	5.74	0.50	ug/l	6.00		96	70-130			
trans-1,2-Dichloroethene	5.56	0.50	ug/l	6.00		93	70-130			
trans-1,3-Dichloropropene	5.57	0.50	ug/l	6.00		93	70-130			
Trichloroethene	5.64	0.50	ug/l	6.00		94	70-130			
Trichlorofluoromethane	5.79	5.0	ug/l	6.00		96	70-130			
Vinyl chloride	5.20	0.50	ug/l	6.00		87	70-130			
LCS Dup (W8F1206-BSD1)				Analyzed: 06/27/08						
Surrogate: 1,2-Dichlorobenzene-d4	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.94*		*ug/l*	*10.0*		*99*	*70-130*			
1,1,1,2-Tetrachloroethane	5.69	0.50	ug/l	6.00		95	70-130	0	30	
1,1,1-Trichloroethane	5.72	0.50	ug/l	6.00		95	70-130	2	30	
1,1,2,2-Tetrachloroethane	5.48	0.50	ug/l	6.00		91	70-130	0.5	30	
1,1,2-Trichloroethane	5.31	0.50	ug/l	6.00		88	70-130	1	30	
1,1-Dichloroethane	5.51	0.50	ug/l	6.00		92	70-130	0	30	
1,1-Dichloroethene	5.48	0.50	ug/l	6.00		91	70-130	2	30	
1,1-Dichloropropene	5.75	0.50	ug/l	6.00		96	70-130	2	30	
1,2,3-Trichlorobenzene	5.92	0.50	ug/l	6.00		99	70-130	0.5	30	
1,2,3-Trichloropropane	5.55	0.50	ug/l	6.00		92	70-130	0	30	
1,2,4-Trichlorobenzene	5.95	0.50	ug/l	6.00		99	70-130	2	30	
1,2,4-Trimethylbenzene	5.98	0.50	ug/l	6.00		100	70-130	0.3	30	
1,2-Dichloroethane	5.28	0.50	ug/l	6.00		88	70-130	0.6	30	
1,2-Dichloropropane	5.40	0.50	ug/l	6.00		90	70-130	0	30	
1,3,5-Trimethylbenzene	6.05	0.50	ug/l	6.00		101	70-130	0.5	30	
1,3-Dichloropropane	5.43	0.50	ug/l	6.00		90	70-130	0.6	30	
2,2-Dichloropropane	6.83	0.50	ug/l	6.00		114	70-130	0.7	30	
2-Butanone	4.93	4.0	ug/l	6.00		82	70-130	6	30	
2-Chloroethyl vinyl ether	5.34	1.0	ug/l	6.00		89	70-130	2	30	

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F1206 - EPA 524.2

LCS Dup (W8F1206-BSD1) Analyzed: 06/27/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
2-Chlorotoluene	5.77	0.50	ug/l	6.00		96	70-130	0.3	30	
2-Hexanone	5.18	5.0	ug/l	6.00		86	70-130	3	30	
4-Chlorotoluene	5.83	0.50	ug/l	6.00		97	70-130	0.5	30	
4-Methyl-2-pentanone	5.22	5.0	ug/l	6.00		87	70-130	1	30	
Acetone	4.50	4.0	ug/l	6.00		75	70-130	5	30	
Benzene	5.54	0.50	ug/l	6.00		92	70-130	1	30	
Bromobenzene	5.55	0.50	ug/l	6.00		92	70-130	0	30	
Bromochloromethane	5.41	0.50	ug/l	6.00		90	70-130	0	30	
Bromodichloromethane	5.53	0.50	ug/l	6.00		92	70-130	1	30	
Bromoform	5.65	0.50	ug/l	6.00		94	70-130	0.2	30	
Bromomethane	6.12	0.50	ug/l	6.00		102	70-130	2	30	
Carbon Disulfide	5.01	0.50	ug/l	6.00		84	70-130	10	30	
Carbon tetrachloride	5.73	0.50	ug/l	6.00		96	70-130	6	30	
Chlorobenzene	5.72	0.50	ug/l	6.00		95	70-130	0.5	30	
Chloroethane	5.33	0.50	ug/l	6.00		89	70-130	2	30	
Chloroform	5.57	0.50	ug/l	6.00		93	70-130	0.5	30	
Chloromethane	4.82	0.50	ug/l	6.00		80	70-130	3	30	
cis-1,2-Dichloroethene	5.48	0.50	ug/l	6.00		91	70-130	0	30	
cis-1,3-Dichloropropene	5.77	0.50	ug/l	6.00		96	70-130	2	30	
Dibromochloromethane	5.50	0.50	ug/l	6.00		92	70-130	0	30	
Dibromomethane	5.39	0.50	ug/l	6.00		90	70-130	0.6	30	
Dichlorodifluoromethane (Freon 12)	4.54	0.50	ug/l	6.00		76	70-130	4	30	
Di-isopropyl ether	5.42	3.0	ug/l	6.00		90	70-130	0.6	30	
Ethyl tert-butyl ether	5.35	3.0	ug/l	6.00		89	70-130	1	30	
Ethylbenzene	5.93	0.50	ug/l	6.00		99	70-130	1	30	
Freon 113	5.02	5.0	ug/l	6.00		84	70-130	11	30	
Hexachlorobutadiene	6.12	0.50	ug/l	6.00		102	70-130	2	30	
Isopropylbenzene	6.07	0.50	ug/l	6.00		101	70-130	2	30	
m,p-Xylene	11.9	1.0	ug/l	12.0		99	70-130	0.8	30	
m-Dichlorobenzene	5.67	0.50	ug/l	6.00		94	70-130	0.9	30	
Methyl tert-butyl ether (MTBE)	5.43	3.0	ug/l	6.00		90	70-130	0.9	30	
Methylene chloride	5.36	0.50	ug/l	6.00		89	70-130	0	30	
Naphthalene	5.91	0.50	ug/l	6.00		98	70-130	1	30	

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F1206 - EPA 524.2

LCS Dup (W8F1206-BSD1) Analyzed: 06/27/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
n-Butylbenzene	6.14	0.50	ug/l	6.00		102	70-130	2	30	
n-Propylbenzene	5.88	0.50	ug/l	6.00		98	70-130	2	30	
o-Dichlorobenzene	5.52	0.50	ug/l	6.00		92	70-130	0.7	30	
o-Xylene	5.94	0.50	ug/l	6.00		99	70-130	0.5	30	
p-Dichlorobenzene	5.66	0.50	ug/l	6.00		94	70-130	1	30	
p-Isopropyltoluene	6.17	0.50	ug/l	6.00		103	70-130	2	30	
sec-Butylbenzene	6.04	0.50	ug/l	6.00		101	70-130	2	30	
Styrene	5.94	0.50	ug/l	6.00		99	70-130	0.2	30	
Tert-amyl methyl ether	5.41	3.0	ug/l	6.00		90	70-130	1	30	
tert-Butylbenzene	6.12	0.50	ug/l	6.00		102	70-130	0.8	30	
Tetrachloroethene	5.71	0.50	ug/l	6.00		95	70-130	1	30	
Toluene	5.72	0.50	ug/l	6.00		95	70-130	0.3	30	
trans-1,2-Dichloroethene	5.52	0.50	ug/l	6.00		92	70-130	0.7	30	
trans-1,3-Dichloropropene	5.67	0.50	ug/l	6.00		94	70-130	2	30	
Trichloroethene	5.49	0.50	ug/l	6.00		92	70-130	3	30	
Trichlorofluoromethane	5.54	5.0	ug/l	6.00		92	70-130	4	30	
Vinyl chloride	5.05	0.50	ug/l	6.00		84	70-130	3	30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062667
Project ID: Recycled Water Bench Test

Date Received: 06/26/08 10:30
Date Reported: 07/18/08 10:37

Notes and Definitions

O-04	This analysis was performed outside the EPA recommended holding time.
MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

8062667 G: on ICE G 125 ml plastic 1 of 4

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER: 27011-07-3200
RECORDER: ______ (SIGN)
SAMPLERS: Vector (PRINT)
Susan Steward (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250 plast. Cubit

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB: Weck Lab

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO$_3$	HCL	NaOH	Field Filtered (check)	Alkalinity Total	Bicarb Alkalin	Boron	Calcium	Magnesium	Sodium	Potassium	Cyanide	PFC	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	~~6/24~~	~~16:00~~	~~SCRWA 1 2514N~~				C	G	X					X	X								1	14day					
2	~~↓~~	~~↓~~	~~SCRWA-1 2514N~~				F	↓		X						X	X	X	X	X				180 day					
3	~~6/23~~	~~15:00~~	~~SCRWA-B 2514F~~				F			X						X	X	X	X	X				↓					
4	~~6/24~~	~~17:00~~	~~DI-1 2514P~~				F			X						X	X	X	X	X									
5	~~6/23~~	~~15:00~~	~~SCRWA-B 2514F~~				C		X					X	X									14day					
6	~~6/24~~	~~17:00~~	~~DI-1 2514P~~				C		X					X	X									↓					
7	↓	↓	↓ ↓				C					X									X			14day					
8	~~6/24~~	~~16:00~~	~~SCRWA-1 2514N~~				C					X									X			↓					
9	↓	↓	1SCRWA-1 2514N				G		X													X							
10	↓	17:00	DI-1 2514P				G	↓	X													X	↓	↓			Did not rec		
11																													
12																													
13																													
14																													
15																													
16																													

For MWH

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time
On Trac Courier	Ice Chest		Susan Steward 6/25/08		

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Susan Steward			
7/3/08 10			
		7-3-8	11:24
	Received for lab By: (Signature)	6/26/08	10:30

Send Lab Results to (Name): Norman Wong (Check Office Below)

Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

2.7°C

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

8062667 G 125ml plastic 1 of 4

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ______ (SIGN)
SAMPLERS Vector (PRINT)
Susan Steward (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250 plast. cont.

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO₃	HCL	NaOH	Field Filtered (check)	ANALYSIS REQUESTED Alkalinity Total	Bicarb Alkalin	Boron	Calcium	Magnesium	Sodium	Potassium	Cyanide	PEC	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/24	16:00	SCRWA 1 2514N				C	G	X					X	X								1	14day					
2	↓	↓	SCRWA-1 2514N				F	↓		X						X	X	X	X	X			↓	180 day					
3	6/23	15:00	SCRWA-B 2514 F				F			X						X	X	X	X	X									
4	6/24	17:00	DI-1 2514P				F			X						X	X	X	X	X				↓					
5	6/23	15:00	SCRWA-B 2514 F				C		X					X	X									14day					
6	6/24	17:00	DI-1 2514 P				C		X	\				X	X									↓					
7	↓	↓	↓ ↓				C					X									X			14day					
8	6/24	16:00	SCRWA-1 2514N				C					X									X			↓					
9	↓	↓	↓ ↓				G		X													X		↓			> Sample sent to MWH as per Norman Wong. hn		
10	↓	~~17:00~~	~~DI-1 2514P~~				B	↓	X													X	↓	↓					
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature) Susan Steward	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
OnTrac Courier	Ice chest		Susan Steward	6/25/08			6/26/08	10:30

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

2.7°C

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

8062667 | 2 of 4

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ______ (SIGN)

SAMPLERS Vector (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250 ml plastic

G. 250 ml glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H3PO4	Field Filtered (check)	Sulfate	Nitrate	Nitrite	Chloride	Bromide	Perchlorate	DOC	TOC	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/24	16:00	SCRWA 1 2514 N				F	G	x				x	x	x	x	x	x				1	2day					
2	↓	17:00	DI-1 2514 P						x				x	x	x	x	x	x					↓					
3	6/23	15:00	SCRWA-B 2514 F				↓		x				x	x	x	x	x	x					↓					
4	6/24	16 00	SCRWA-1 2514N						x										x				28day					
5	↓	1700	DI-1 2514P				↓		x										x									
6	↓	1600	SCRWA-1 2514N				G		x											x			↓					
7	↓	1700	DI-1 2514P				G		x											x			↓					
8		1700	↓ ↓				G					x									x							
9	↓	1600	SCRWA-1 2514 N				G	↓				x	↓								x	↓	↓					
10	6/23	1600	SCRWA-B 2514F				G	↓	x											x			↓					
11	6/24	11:00	SCRWA-B 2514 F				G	↓				x									x		↓					
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature) Susan Stewart	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Ice chest		Susan Steward	6/25/08		Jamalimer	6/26/08	10:30

Send Lab Results to (Name): Norman Wong (Check Office Below)

Verbals Requested: Yes ☐ No ☐

2.7°C

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

80626667

3 of 4

PROJECT NAME Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ____________ (SIGN)

SAMPLERS Vector (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 40 ml glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY

LAB PROJECT NO. ____________

2 each

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED															
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	Ascorbic Hcl	Field Filtered (check)	Bromochloro ~~Acetic~~ methane	Bromoform	Chloroform	Carbon Tetrach	* see Notes	Xylenes Total	Addl 810 VOC			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/24	1700	DI-1 2514 P				F	G				X		X	X	X	X	X	X	X			1			X	* Dibromochloromethane		
2	6/24	1800	SCRWA-2 2514 N				F	G				X		X	✓	X	X	X	X	X			1			X			
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Ice Chest		Susan Stewart	6/25/08		James Gimer	6/26/08	10:30

Send Lab Results to (Name): Norman Wong (Check Office Below)

Verbals Requested: Yes ☐ No ☐

2.7°C

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ____________ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions) 8062667

4 of 4

PROJECT NAME Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ____________ (SIGN)

SAMPLERS Vector (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250 ml 9055

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY

LAB PROJECT NO. ____________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO₃	HCL	NH4Cl	Field Filtered (check)	ANALYSIS REQUESTED Bromochloro Acetic Acid	Dibromo "	Dichloro "	Monobromo "	Monochloro "	Trichloro "	Alkalinity Total	Bicarb Alkalinity	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/24	1700	DI-1 2514P				F	G				X	X	X	X	X	X	X	X			1	14 day					
2	6/24	1800	SCRWA-1 2514N				F	G				X	X	X	X	X	X	✓	X			1	↓					
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature) Susan Stewart	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
OnTrac courier	Icechest		Susan Stewart	6/25		James Gomes	6/26/08	10:30

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ OTHER ____________ TEL ________ FAX ________

2.7°C

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

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Phone 626.336.2139 Fax 626.336.2634
info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client: Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong

Phone: (650) 641-8258
Fax: (650) 960-0739

Report Date: 06/30/08 22:02
Received Date: 06/20/08 09:00
Turn Around: Normal

Work Order #: 8062047

Client Project: 27011-07-3200

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Norman Wong :

Enclosed are the results of analyses for samples received 06/20/08 09:00 with the Chain of Custody document. The samples were received in good condition. The samples were received at 5.3 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Hai Van Nguyen
Project Manager

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062047 Project ID: 27011-07-3200	Date Received: Date Reported:	06/20/08 09:00 06/30/08 22:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
SCRWA-B 2514-F	Vector Engineering		8062047-01	Water	06/17/08 11:30
SJ/SC-C 2514-C	Vector Engineering		8062047-02	Water	06/17/08 14:30
SCRWA-D 2514-H	Vector Engineering		8062047-03	Water	06/17/08 14:30
SCRWA-C 2514-G	Vector Engineering		8062047-04	Water	06/17/08 14:30
DI-C 2514 K	Vector Engineering		8062047-05	Water	06/17/08 14:30
SJ/SC-D 2514-D	Vector Engineering		8062047-06	Water	06/17/08 15:30
SJ/SC-C 2514-C	Vector Engineering		8062047-07	Water	06/17/08 09:00
SJ/SC-D 2514-D	Vector Engineering		8062047-08	Water	06/17/08 09:00
SCRWA-D 2514H	Vector Engineering		8062047-09	Water	06/17/08 09:00
SCRWA-C 2514G	Vector Engineering		8062047-10	Water	06/17/08 09:00
DI-C 2514K	Vector Engineering		8062047-11	Water	06/17/08 09:00
SCRWA-B 2514-F	Vector Engineering		8062047-12	Water	06/16/08 14:50
SCRWA-C 2514-G	Vector Engineering		8062047-13	Water	06/17/08 14:30
SCRWA-D 2514-H	Vector Engineering		8062047-14	Water	06/17/08 14:30
SJ/SCC 2514-C	Vector Engineering		8062047-15	Water	06/17/08 14:30
DI-C 2514-K	Vector Engineering		8062047-16	Water	06/17/08 14:30
SJ/SC-D 2514-D	Vector Engineering		8062047-17	Water	06/17/08 15:00
SCRWA-C 2514-G	Vector Engineering		8062047-18	Water	06/17/08 09:30
SCRWA-D 2514-H	Vector Engineering		8062047-19	Water	06/17/08 09:30
SJ/SC-C 2514-C	Vector Engineering		8062047-20	Water	06/17/08 09:30
DI-C 2514-K	Vector Engineering		8062047-21	Water	06/17/08 09:30
SJ/SC-D 2514-D	Vector Engineering		8062047-22	Water	06/17/08 11:00
SCRWA-B 2514-F	Vector Engineering		8062047-23	Water	06/17/08 11:50
SJ/SC-D 2514-D	Vector Engineering		8062047-24	Water	06/17/08 14:30
SJ/SC-C 2514-C	Vector Engineering		8062047-25	Water	06/17/08 12:00
SCRWA-C 2514-G	Vector Engineering		8062047-26	Water	06/17/08 12:00
SCRWA-D 2514-H	Vector Engineering		8062047-27	Water	06/17/08 12:00
DI-C 2514-K	Vector Engineering		8062047-28	Water	06/17/08 12:00
SCRWA-B 2514-F	Vector Engineering		8062047-29	Water	06/16/08 11:50
SJ/SC-C 2514-C	Vector Engineering		8062047-30	Water	06/17/08 11:00
SJ/SC-D 2514-D	Vector Engineering		8062047-31	Water	06/17/08 11:00

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062047
Project ID: 27011-07-3200

Date Received: 06/20/08 09:00
Date Reported: 06/30/08 22:02

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
SCRWA-C 2514-G	Vector Engineering		8062047-32	Water	06/16/08 11:50
SCRWA-D 2514-H	Vector Engineering		8062047-33	Water	06/16/08 11:50
DI-C 2514-K	Vector Engineering		8062047-34	Water	06/16/08 11:50
SJ/SC-C 2514-C	Vector Engineering		8062047-35	Water	06/17/08 10:00
SJ/SC-D 2514-D	Vector Engineering		8062047-36	Water	06/17/08 11:00
SCRWA-C 2514-G	Vector Engineering		8062047-37	Water	06/17/08 10:00
SCRWA-D 2514-H	Vector Engineering		8062047-38	Water	06/17/08 10:00
DI-C 2514-K	Vector Engineering		8062047-39	Water	06/17/08 10:00
SJ/SC-C 2514-C	Vector Engineering		8062047-40	Water	06/17/08 14:30
DI-C 2514-K	Vector Engineering		8062047-41	Water	06/17/08 14:30
SJ/SC-D 2514-D	Vector Engineering		8062047-42	Water	06/17/08 14:30
SCRWA-D 2514-H	Vector Engineering		8062047-43	Water	06/17/08 14:30
SCRWA-B 2514-F	Vector Engineering		8062047-44	Water	06/17/08 14:50
SCRWA-C 2514-G	Vector Engineering		8062047-45	Water	06/17/08 14:30
SJ/SC-C 2514-C	Vector Engineering		8062047-46	Water	06/17/08 10:30
SCRWA-C 2514-G	Vector Engineering		8062047-47	Water	06/17/08 10:30
SCRWA-D 2514-H	Vector Engineering		8062047-48	Water	06/17/08 10:30
DI-C 2514-K	Vector Engineering		8062047-49	Water	06/17/08 10:30
SJ/SC-D 2514-D	Vector Engineering		8062047-50	Water	06/17/08 10:30

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062047
Project ID: 27011-07-3200

Date Received: 06/20/08 09:00
Date Reported: 06/30/08 22:02

SCRWA-B 2514-F 8062047-01 (Water) Date 06/17/08 11:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F0942	06/23/08	06/24/08	hml	

SJ/SC-C 2514-C 8062047-02 (Water) Date 06/17/08 14:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F0942	06/23/08	06/24/08	hml	

SCRWA-D 2514-H 8062047-03 (Water) Date 06/17/08 14:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F1048	06/25/08	06/26/08	hml	

SCRWA-C 2514-G 8062047-04 (Water) Date 06/17/08 14:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F1048	06/25/08	06/26/08	hml	

DI-C 2514 K 8062047-05 (Water) Date 06/17/08 14:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F1048	06/25/08	06/26/08	hml	

SJ/SC-D 2514-D 8062047-06 (Water) Date 06/17/08 15:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F1048	06/25/08	06/26/08	hml	

SJ/SC-C 2514-C 8062047-07 (Water) Date 06/17/08 09:00

SJ/SC-C 2514-C 8062047-07 (Water) **Date** **06/17/08 09:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**180**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	**220**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	

SJ/SC-D 2514-D 8062047-08 (Water) **Date** **06/17/08 09:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**200**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	**240**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	

SCRWA-D 2514H 8062047-09 (Water) **Date** **06/17/08 09:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**240**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	**290**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	

SCRWA-C 2514G 8062047-10 (Water) **Date** **06/17/08 09:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**230**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	**280**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	

DI-C 2514K 8062047-11 (Water) **Date** **06/17/08 09:00**

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062047 Project ID: 27011-07-3200	Date Received: 06/20/08 09:00 Date Reported: 06/30/08 22:02

DI-C 2514K 8062047-11 (Water) Date **06/17/08 09:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	9.5	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	12	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	

SCRWA-B 2514-F 8062047-12 (Water) Date **06/16/08 14:50**

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F1096	06/25/08	06/25/08	mac	

SCRWA-C 2514-G 8062047-13 (Water) Date **06/17/08 14:30**

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F1096	06/25/08	06/25/08	mac	

SCRWA-D 2514-H 8062047-14 (Water) Date **06/17/08 14:30**

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F1096	06/25/08	06/25/08	mac	

SJ/SCC 2514-C 8062047-15 (Water) Date **06/17/08 14:30**

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F1096	06/25/08	06/25/08	mac	

DI-C 2514-K 8062047-16 (Water) Date **06/17/08 14:30**

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062047
Project ID: 27011-07-3200

Date Received: 06/20/08 09:00
Date Reported: 06/30/08 22:02

DI-C 2514-K 8062047-16 (Water) Date **06/17/08 14:30**

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F1096	06/25/08	06/25/08	mac	

SJ/SC-D 2514-D 8062047-17 (Water) Date **06/17/08 15:00**

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F1096	06/25/08	06/25/08	mac	

SCRWA-C 2514-G 8062047-18 (Water) Date **06/17/08 09:30**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	360	ug/l	10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Calcium	52	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Potassium	13	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Magnesium	35	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Sodium	140	mg/l	0.50	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	

SCRWA-D 2514-H 8062047-19 (Water) Date **06/17/08 09:30**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	370	ug/l	10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Calcium	55	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Potassium	24	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Magnesium	31	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Sodium	140	mg/l	0.50	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	

SJ/SC-C 2514-C 8062047-20 (Water) Date **06/17/08 09:30**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062047 Project ID: 27011-07-3200	Date Received: 06/20/08 09:00 Date Reported: 06/30/08 22:02

SJ/SC-C 2514-C 8062047-20 (Water) **Date** **06/17/08 09:30**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	440	ug/l	10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Calcium	57	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Potassium	11	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Magnesium	26	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Sodium	140	mg/l	0.50	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	

DI-C 2514-K 8062047-21 (Water) **Date** **06/17/08 09:30**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	16	ug/l	10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Calcium	150	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Potassium	0.98	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Magnesium	40	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Sodium	14	mg/l	0.50	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	

SJ/SC-D 2514-D 8062047-22 (Water) **Date** **06/17/08 11:00**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	430	ug/l	10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Calcium	51	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Potassium	12	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Magnesium	32	mg/l	0.10	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	
Sodium	130	mg/l	0.50	1	EPA 200.7	W8F0889	06/23/08	06/24/08	jba	

SCRWA-B 2514-F 8062047-23 (Water) **Date** **06/17/08 11:50**

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062047 Project ID: 27011-07-3200	Date Received: 06/20/08 09:00 Date Reported: 06/30/08 22:02

SCRWA-B 2514-F 8062047-23 (Water) Date 06/17/08 11:50

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	108	%	*70-130*		*EPA 552.2*	*W8F0897*	*06/23/08*	*06/26/08*	cwn	

SJ/SC-D 2514-D 8062047-24 (Water) Date 06/17/08 14:30

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dichloroacetic acid (dcaa)	**2.0**	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Total HAA5	**14**	ug/l	5.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Trichloroacetic acid (tcaa)	**12**	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	111	%	*70-130*		*EPA 552.2*	*W8F0897*	*06/23/08*	*06/26/08*	cwn	

SJ/SC-C 2514-C 8062047-25 (Water) Date 06/17/08 12:00

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	**6.3**	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dibromoacetic acid (dbaa)	**2.7**	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dichloroacetic acid (dcaa)	**7.0**	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Total HAA5	**22**	ug/l	5.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	

SJ/SC-C 2514-C 8062047-25 (Water) Date 06/17/08 12:00

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Trichloroacetic acid (tcaa)	**12**	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	111	%	*70-130*		*EPA 552.2*	*W8F0897*	*06/23/08*	*06/26/08*	cwn	

SCRWA-C 2514-G 8062047-26 (Water) Date 06/17/08 12:00

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	95	%	*70-130*		*EPA 552.2*	*W8F0897*	*06/23/08*	*06/26/08*	cwn	

SCRWA-D 2514-H 8062047-27 (Water) Date 06/17/08 12:00

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	113	%	*70-130*		*EPA 552.2*	*W8F0897*	*06/23/08*	*06/26/08*	cwn	

DI-C 2514-K 8062047-28 (Water) Date 06/17/08 12:00

DI-C 2514-K 8062047-28 (Water) Date **06/17/08 12:00**

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0897	06/23/08	06/26/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	95	%	*70-130*		*EPA 552.2*	*W8F0897*	*06/23/08*	*06/26/08*	cwn	

SCRWA-B 2514-F 8062047-29 (Water) Date **06/16/08 11:50**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dissolved Organic Carbon	11	mg/l	0.30	1	SM5310C	W8F1173	06/27/08	06/27/08	jlp	

SJ/SC-C 2514-C 8062047-30 (Water) Date **06/17/08 11:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dissolved Organic Carbon	6.0	mg/l	0.30	1	SM5310C	W8F1173	06/27/08	06/27/08	jlp	

SJ/SC-D 2514-D 8062047-31 (Water) Date **06/17/08 11:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dissolved Organic Carbon	6.3	mg/l	0.30	1	SM5310C	W8F1173	06/27/08	06/27/08	jlp	

SCRWA-C 2514-G 8062047-32 (Water) Date **06/16/08 11:50**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dissolved Organic Carbon	4.4	mg/l	0.30	1	SM5310C	W8F1173	06/27/08	06/27/08	jlp	

SCRWA-D 2514-H 8062047-33 (Water) Date 06/16/08 11:50

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dissolved Organic Carbon	4.3	mg/l	0.30	1	SM5310C	W8F1173	06/27/08	06/27/08	jlp	

DI-C 2514-K 8062047-34 (Water) Date 06/16/08 11:50

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dissolved Organic Carbon	0.53	mg/l	0.30	1	SM5310C	W8F1173	06/27/08	06/27/08	jlp	

SJ/SC-C 2514-C 8062047-35 (Water) Date 06/17/08 10:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	
Chloride	210	mg/l	5.0	10	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	
Sulfate as SO4	100	mg/l	5.0	10	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	

SJ/SC-D 2514-D 8062047-36 (Water) Date 06/17/08 11:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	
Chloride	180	mg/l	5.0	10	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	
Sulfate as SO4	97	mg/l	5.0	10	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	

SCRWA-C 2514-G 8062047-37 (Water) Date 06/17/08 10:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	
Chloride	210	mg/l	5.0	10	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	
Sulfate as SO4	92	mg/l	5.0	10	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	

SCRWA-D 2514-H 8062047-38 (Water) Date 06/17/08 10:00

SCRWA-D 2514-H 8062047-38 (Water) Date 06/17/08 10:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	
Chloride	**210**	mg/l	5.0	10	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	
Sulfate as SO4	**95**	mg/l	5.0	10	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	

DI-C 2514-K 8062047-39 (Water) Date 06/17/08 10:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	
Chloride	**230**	mg/l	5.0	10	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	
Sulfate as SO4	**3.0**	mg/l	0.50	1	EPA 300.0	W8F1223	06/27/08	06/27/08	mac	

SJ/SC-C 2514-C 8062047-40 (Water) Date 06/17/08 14:30

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062047
Project ID: 27011-07-3200

Date Received: 06/20/08 09:00
Date Reported: 06/30/08 22:02

SJ/SC-C 2514-C 8062047-40 (Water) Date **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Butanone	**54**	ug/l	25	5	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromodichloromethane	**5.2**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromoform	**0.61**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroform	**6.6**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromochloromethane	**2.9**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SJ/SC-C 2514-C 8062047-40 (Water) Date 06/17/08 14:30

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Toluene	**0.51**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	98	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	
Surrogate: 4-Bromofluorobenzene	96	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	

DI-C 2514-K 8062047-41 (Water) Date 06/17/08 14:30

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062047
Project ID: 27011-07-3200

Date Received: 06/20/08 09:00
Date Reported: 06/30/08 22:02

DI-C 2514-K 8062047-41 (Water) **Date** **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Butanone	**160**	ug/l	50	10	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062047 Project ID: 27011-07-3200	Date Received: 06/20/08 09:00 Date Reported: 06/30/08 22:02

DI-C 2514-K 8062047-41 (Water) **Date** **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroform	**0.77**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

DI-C 2514-K 8062047-41 (Water) Date **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	97	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	
Surrogate: 4-Bromofluorobenzene	95	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	

SJ/SC-D 2514-D 8062047-42 (Water) Date **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

SJ/SC-D 2514-D 8062047-42 (Water) Date **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
2-Butanone	**14**	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromodichloromethane	**3.5**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroform	**4.2**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromochloromethane	**1.9**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062047 Project ID: 27011-07-3200	Date Received: 06/20/08 09:00 Date Reported: 06/30/08 22:02

SJ/SC-D 2514-D　8062047-42 (Water)　Date　06/17/08 14:30

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	98	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	
Surrogate: 4-Bromofluorobenzene	95	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	

SCRWA-D 2514-H　8062047-43 (Water)　Date　06/17/08 14:30

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062047
Project ID: 27011-07-3200

Date Received: 06/20/08 09:00
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SCRWA-D 2514-H 8062047-43 (Water) Date 06/17/08 14:30

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromodichloromethane	**3.1**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroform	**14**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062047 Project ID: 27011-07-3200	Date Received: Date Reported:	06/20/08 09:00 06/30/08 22:02

SCRWA-D 2514-H 8062047-43 (Water) Date **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromochloromethane	**0.59**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SCRWA-D 2514-H 8062047-43 (Water) Date **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	98	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	
Surrogate: 4-Bromofluorobenzene	96	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	

SCRWA-B 2514-F 8062047-44 (Water) Date **06/17/08 14:50**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062047
Project ID: 27011-07-3200

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SCRWA-B 2514-F 8062047-44 (Water) Date **06/17/08 14:50**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromodichloromethane	**3.1**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroform	**16**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SCRWA-B 2514-F 8062047-44 (Water) Date **06/17/08 14:50**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	99	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	
Surrogate: 4-Bromofluorobenzene	97	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	

SCRWA-C 2514-G 8062047-45 (Water) Date **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062047 Project ID: 27011-07-3200	Date Received: 06/20/08 09:00 Date Reported: 06/30/08 22:02

SCRWA-C 2514-G 8062047-45 (Water) Date **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Butanone	**9.6**	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromodichloromethane	**4.9**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloroform	**18**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062047
Project ID: 27011-07-3200

Date Received: 06/20/08 09:00
Date Reported: 06/30/08 22:02

SCRWA-C 2514-G 8062047-45 (Water) Date **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromochloromethane	**0.99**	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	

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SCRWA-C 2514-G 8062047-45 (Water) **Date** **06/17/08 14:30**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0956	06/23/08	06/23/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	98	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	
Surrogate: 4-Bromofluorobenzene	96	%	*70-130*		*EPA 524.2*	*W8F0956*	*06/23/08*	*06/23/08*	mdt	

SJ/SC-C 2514-C 8062047-46 (Water) **Date** **06/17/08 10:30**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Organic Carbon (TOC)	5.9	mg/l	0.30	1	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

SCRWA-C 2514-G 8062047-47 (Water) **Date** **06/17/08 10:30**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Organic Carbon (TOC)	4.3	mg/l	0.30	1	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

SCRWA-D 2514-H 8062047-48 (Water) **Date** **06/17/08 10:30**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Organic Carbon (TOC)	4.9	mg/l	0.30	1	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

DI-C 2514-K 8062047-49 (Water) **Date** **06/17/08 10:30**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Organic Carbon (TOC)	0.68	mg/l	0.30	1	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

SJ/SC-D 2514-D 8062047-50 (Water) **Date** **06/17/08 10:30**

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062047
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Date Received: 06/20/08 09:00
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SJ/SC-D 2514-D 8062047-50 (Water) Date 06/17/08 10:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Organic Carbon (TOC)	6.4	mg/l	0.30	1	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

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QUALITY CONTROL SECTION

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1223 - EPA 300.0/300.1										
Blank (W8F1223-BLK1)				Analyzed: 06/27/08						
Bromide	ND	0.50	mg/l							
Chloride	ND	0.50	mg/l							
Sulfate as SO4	ND	0.50	mg/l							
LCS (W8F1223-BS1)				Analyzed: 06/27/08						
Bromide	8.70	0.50	mg/l	8.00		109	90-110			
Chloride	4.12	0.50	mg/l	4.00		103	90-110			
Sulfate as SO4	8.14	0.50	mg/l	8.00		102	90-110			
Matrix Spike (W8F1223-MS1)		**Source: 8062541-03**		Analyzed: 06/27/08						
Bromide	87.2	5.0	mg/l	80.0	0.110	109	83-113			
Chloride	55.0	5.0	mg/l	40.0	13.4	104	72-118			
Sulfate as SO4	97.0	5.0	mg/l	80.0	17.1	100	84-114			
Matrix Spike (W8F1223-MS2)		**Source: 8062047-35**		Analyzed: 06/27/08						
Bromide	86.2	5.0	mg/l	80.0	0.319	107	83-113			
Chloride	249	5.0	mg/l	40.0	209	99	72-118			
Sulfate as SO4	180	5.0	mg/l	80.0	103	97	84-114			
Matrix Spike Dup (W8F1223-MSD1)		**Source: 8062541-03**		Analyzed: 06/27/08						
Bromide	86.9	5.0	mg/l	80.0	0.110	108	83-113	0.3	20	
Chloride	54.7	5.0	mg/l	40.0	13.4	103	72-118	0.6	20	
Sulfate as SO4	97.7	5.0	mg/l	80.0	17.1	101	84-114	0.7	20	
Matrix Spike Dup (W8F1223-MSD2)		**Source: 8062047-35**		Analyzed: 06/27/08						
Bromide	86.2	5.0	mg/l	80.0	0.319	107	83-113	0.06	20	
Chloride	250	5.0	mg/l	40.0	209	101	72-118	0.4	20	
Sulfate as SO4	181	5.0	mg/l	80.0	103	98	84-114	0.3	20	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062047 Project ID: 27011-07-3200	Date Received: 06/20/08 09:00 Date Reported: 06/30/08 22:02

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0895 - General Preparation										
Blank (W8F0895-BLK1)				Analyzed: 06/23/08						
Alkalinity as CaCO3	ND	2.0	mg/l							
Bicarbonate Alkalinity as HCO3	ND	2.0	mg/l							
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l							
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l							
LCS (W8F0895-BS1)				Analyzed: 06/23/08						
Alkalinity as CaCO3	44.2	2.0	mg/l	45.3		98	94-108			
Bicarbonate Alkalinity as HCO3	53.9	2.0	mg/l	55.3		98	94-108			
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Duplicate (W8F0895-DUP1)		**Source: 8062108-01**		Analyzed: 06/23/08						
Alkalinity as CaCO3	185	2.0	mg/l		185			0	15	
Bicarbonate Alkalinity as HCO3	226	2.0	mg/l		226			0	15	
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Batch W8F0942 - General Preparation										
Blank (W8F0942-BLK1)				Analyzed: 06/24/08						
Total Cyanide	ND	5.0	ug/l							
LCS (W8F0942-BS1)				Analyzed: 06/24/08						
Total Cyanide	52.4	5.0	ug/l	50.0		105	90-110			
Matrix Spike (W8F0942-MS1)		**Source: 8061741-01**		Analyzed: 06/24/08						
Total Cyanide	52.9	5.0	ug/l	50.0	ND	106	90-110			

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0942 - General Preparation										
Matrix Spike (W8F0942-MS2)		**Source: 8062047-01**		Analyzed: 06/24/08						
Total Cyanide	57.6	5.0	ug/l	50.0	2.95	109	90-110			
Matrix Spike Dup (W8F0942-MSD1)		**Source: 8061741-01**		Analyzed: 06/24/08						
Total Cyanide	54.3	5.0	ug/l	50.0	ND	109	90-110	3	20	
Matrix Spike Dup (W8F0942-MSD2)		**Source: 8062047-01**		Analyzed: 06/24/08						
Total Cyanide	57.9	5.0	ug/l	50.0	2.95	110	90-110	0.5	20	
Batch W8F1048 - General Preparation										
Blank (W8F1048-BLK1)				Analyzed: 06/26/08						
Total Cyanide	ND	5.0	ug/l							
LCS (W8F1048-BS1)				Analyzed: 06/26/08						
Total Cyanide	50.4	5.0	ug/l	50.0		101	90-110			
Matrix Spike (W8F1048-MS1)		**Source: 8062047-03**		Analyzed: 06/26/08						
Total Cyanide	52.9	5.0	ug/l	50.0	ND	106	90-110			
Matrix Spike (W8F1048-MS2)		**Source: 8062047-04**		Analyzed: 06/26/08						
Total Cyanide	54.1	5.0	ug/l	50.0	ND	108	90-110			
Matrix Spike Dup (W8F1048-MSD1)		**Source: 8062047-03**		Analyzed: 06/26/08						
Total Cyanide	39.2	5.0	ug/l	50.0	ND	78	90-110	30	20	MS-01
Matrix Spike Dup (W8F1048-MSD2)		**Source: 8062047-04**		Analyzed: 06/26/08						
Total Cyanide	51.7	5.0	ug/l	50.0	ND	103	90-110	5	20	

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1062 - SM5310										
Blank (W8F1062-BLK1)				Analyzed: 06/25/08						
Total Organic Carbon (TOC)	ND	0.30	mg/l							
LCS (W8F1062-BS1)				Analyzed: 06/25/08						
Total Organic Carbon (TOC)	4.73	0.30	mg/l	5.00		95	90-110			
Matrix Spike (W8F1062-MS1)		Source: 8062047-49		Analyzed: 06/25/08						
Total Organic Carbon (TOC)	5.01	0.30	mg/l	5.00	0.683	86	84-107			
Matrix Spike Dup (W8F1062-MSD1)		Source: 8062047-49		Analyzed: 06/25/08						
Total Organic Carbon (TOC)	4.96	0.30	mg/l	5.00	0.683	86	84-107	0.9	20	
Batch W8F1173 - SM5310										
Blank (W8F1173-BLK1)				Analyzed: 06/27/08						
Dissolved Organic Carbon	ND	0.30	mg/l							
LCS (W8F1173-BS1)				Analyzed: 06/27/08						
Dissolved Organic Carbon	4.80	0.30	mg/l	5.00		96	80-120			
LCS Dup (W8F1173-BSD1)				Analyzed: 06/27/08						
Dissolved Organic Carbon	4.78	0.30	mg/l	5.00		96	80-120	0.4	20	

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HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0897 - EPA 500 Series										
Blank (W8F0897-BLK1)				Analyzed: 06/27/08						
Surrogate: 2,3-Dibromopropionic acid	*10.2*		*ug/l*	*10.0*		*102*	*70-130*			
Bromochloroacetic acid (bcaa)	ND	1.0	ug/l							
Dibromoacetic acid (dbaa)	ND	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	2.0	ug/l							
Total HAA5	ND	5.0	ug/l							
Trichloroacetic acid (tcaa)	ND	1.0	ug/l							
LCS (W8F0897-BS1)				Analyzed: 06/27/08						
Surrogate: 2,3-Dibromopropionic acid	*11.1*		*ug/l*	*10.0*		*111*	*70-130*			
Bromochloroacetic acid (bcaa)	10.3	1.0	ug/l	10.0		103	70-130			
Dibromoacetic acid (dbaa)	10.2	1.0	ug/l	10.0		102	70-130			
Dichloroacetic acid (dcaa)	11.0	1.0	ug/l	10.0		110	70-130			
Monobromoacetic acid (mbaa)	8.07	1.0	ug/l	10.0		81	70-130			
Monochloroacetic acid (mcaa)	9.90	2.0	ug/l	10.0		99	70-130			
Trichloroacetic acid (tcaa)	9.97	1.0	ug/l	10.0		100	70-130			
Matrix Spike (W8F0897-MS1)	**Source: 8062013-03**			Analyzed: 06/26/08						
Surrogate: 2,3-Dibromopropionic acid	*11.2*		*ug/l*	*10.0*		*112*	*70-130*			
Bromochloroacetic acid (bcaa)	17.4	1.0	ug/l	10.0	7.24	101	70-130			
Dibromoacetic acid (dbaa)	15.0	1.0	ug/l	10.0	4.67	103	70-130			
Dichloroacetic acid (dcaa)	25.9	1.0	ug/l	10.0	13.9	120	70-130			
Monobromoacetic acid (mbaa)	8.02	1.0	ug/l	10.0	ND	80	70-130			
Monochloroacetic acid (mcaa)	5.30	2.0	ug/l	10.0	ND	53	70-130			MS-05
Trichloroacetic acid (tcaa)	22.7	1.0	ug/l	10.0	13.8	89	70-130			
Matrix Spike (W8F0897-MS2)	**Source: 8062047-23**			Analyzed: 06/26/08						
Surrogate: 2,3-Dibromopropionic acid	*11.0*		*ug/l*	*10.0*		*110*	*70-130*			
Bromochloroacetic acid (bcaa)	10.7	1.0	ug/l	10.0	0.406	103	70-130			
Dibromoacetic acid (dbaa)	10.6	1.0	ug/l	10.0	ND	106	70-130			
Dichloroacetic acid (dcaa)	11.3	1.0	ug/l	10.0	0.460	108	70-130			
Monobromoacetic acid (mbaa)	8.12	1.0	ug/l	10.0	ND	81	70-130			

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0897 - EPA 500 Series										
Matrix Spike (W8F0897-MS2)	**Source: 8062047-23**			Analyzed: 06/26/08						
Monochloroacetic acid (mcaa)	10.6	2.0	ug/l	10.0	ND	106	70-130			
Trichloroacetic acid (tcaa)	10.3	1.0	ug/l	10.0	0.245	101	70-130			
Matrix Spike Dup (W8F0897-MSD1)	**Source: 8062013-03**			Analyzed: 06/26/08						
Surrogate: 2,3-Dibromopropionic acid	*11.5*		*ug/l*	*10.0*		*115*	*70-130*			
Bromochloroacetic acid (bcaa)	18.3	1.0	ug/l	10.0	7.24	110	70-130	5	30	
Dibromoacetic acid (dbaa)	15.6	1.0	ug/l	10.0	4.67	109	70-130	4	30	
Dichloroacetic acid (dcaa)	26.6	1.0	ug/l	10.0	13.9	127	70-130	2	30	
Monobromoacetic acid (mbaa)	7.71	1.0	ug/l	10.0	ND	77	70-130	4	30	
Monochloroacetic acid (mcaa)	5.48	2.0	ug/l	10.0	ND	55	70-130	3	30	MS-05
Trichloroacetic acid (tcaa)	25.2	1.0	ug/l	10.0	13.8	114	70-130	10	30	
Matrix Spike Dup (W8F0897-MSD2)	**Source: 8062047-23**			Analyzed: 06/26/08						
Surrogate: 2,3-Dibromopropionic acid	*11.8*		*ug/l*	*10.0*		*118*	*70-130*			
Bromochloroacetic acid (bcaa)	11.4	1.0	ug/l	10.0	0.406	110	70-130	6	30	
Dibromoacetic acid (dbaa)	11.1	1.0	ug/l	10.0	ND	111	70-130	5	30	
Dichloroacetic acid (dcaa)	11.4	1.0	ug/l	10.0	0.460	110	70-130	2	30	
Monobromoacetic acid (mbaa)	7.84	1.0	ug/l	10.0	ND	78	70-130	4	30	
Monochloroacetic acid (mcaa)	10.5	2.0	ug/l	10.0	ND	105	70-130	0.6	30	
Trichloroacetic acid (tcaa)	11.4	1.0	ug/l	10.0	0.245	112	70-130	10	30	

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0889 - EPA 200.2										
Blank (W8F0889-BLK1)				Analyzed: 06/24/08						
Calcium	ND	0.10	mg/l							
Magnesium	ND	0.10	mg/l							
Potassium	ND	0.10	mg/l							
Sodium	ND	0.50	mg/l							
Total Boron	ND	10	ug/l							
LCS (W8F0889-BS1)				Analyzed: 06/24/08						
Calcium	48.7	0.10	mg/l	50.2		97	85-115			
Magnesium	48.6	0.10	mg/l	50.2		97	85-115			
Potassium	51.6	0.10	mg/l	52.0		99	85-115			
Sodium	50.8	0.50	mg/l	50.2		101	85-115			
Total Boron	193	10	ug/l	200		97	85-115			
Matrix Spike (W8F0889-MS1)	**Source: 8062047-21**			Analyzed: 06/24/08						
Calcium	202	0.10	mg/l	50.2	150	104	70-130			
Magnesium	89.6	0.10	mg/l	50.2	40.1	99	70-130			
Potassium	52.6	0.10	mg/l	52.0	0.978	99	70-130			
Sodium	63.7	0.50	mg/l	50.2	13.5	100	70-130			
Total Boron	213	10	ug/l	200	15.6	99	70-130			
Matrix Spike Dup (W8F0889-MSD1)	**Source: 8062047-21**			Analyzed: 06/24/08						
Calcium	203	0.10	mg/l	50.2	150	107	70-130	0.8	30	
Magnesium	91.1	0.10	mg/l	50.2	40.1	102	70-130	2	30	
Potassium	53.4	0.10	mg/l	52.0	0.978	101	70-130	2	30	
Sodium	64.9	0.50	mg/l	50.2	13.5	102	70-130	2	30	
Total Boron	212	10	ug/l	200	15.6	99	70-130	0.4	30	

Perchlorate by EPA 314.0 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1096 - EPA 314.0, dir. inj.										
Blank (W8F1096-BLK1)				Analyzed: 06/25/08						
Perchlorate	ND	4.0	ug/l							
LCS (W8F1096-BS1)				Analyzed: 06/25/08						
Perchlorate	18.8	4.0	ug/l	20.0		94	85-115			
Matrix Spike (W8F1096-MS1)		**Source: 8062383-01**		Analyzed: 06/25/08						
Perchlorate	20.9	4.0	ug/l	20.0	1.66	96	80-120			
Matrix Spike Dup (W8F1096-MSD1)		**Source: 8062383-01**		Analyzed: 06/25/08						
Perchlorate	20.1	4.0	ug/l	20.0	1.66	92	80-120	4	15	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8062047
Project ID: 27011-07-3200

Date Received: 06/20/08 09:00
Date Reported: 06/30/08 22:02

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0956 - EPA 524.2

Blank (W8F0956-BLK1) Analyzed: 06/23/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	*8.92*		*ug/l*	*10.0*		*89*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*8.77*		*ug/l*	*10.0*		*88*	*70-130*			
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
1,1-Dichloropropene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3 Dichloropropene (Total)	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	0.50	ug/l							
2-Butanone	ND	5.0	ug/l							
2-Chloroethyl vinyl ether	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
4-Methyl-2-pentanone	ND	5.0	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	0.50	ug/l							
Bromomethane	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0956 - EPA 524.2

Blank (W8F0956-BLK1) Analyzed: 06/23/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	0.50	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l							
Di-isopropyl ether	ND	3.0	ug/l							
Ethyl tert-butyl ether	ND	3.0	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Freon 113	ND	5.0	ug/l							
Hexachlorobutadiene	ND	0.50	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
m,p-Xylene	ND	1.0	ug/l							
m-Dichlorobenzene	ND	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	3.0	ug/l							
Methylene chloride	ND	0.50	ug/l							
Naphthalene	ND	0.50	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
o-Dichlorobenzene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
p-Dichlorobenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
Tert-amyl methyl ether	ND	3.0	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0956 - EPA 524.2										
Blank (W8F0956-BLK1)				Analyzed: 06/23/08						
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes (total)	ND	0.50	ug/l							
LCS (W8F0956-BS1)				Analyzed: 06/23/08						
Surrogate: 1,2-Dichlorobenzene-d4	*9.98*		*ug/l*	*10.0*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.88*		*ug/l*	*10.0*		*99*	*70-130*			
1,1,1,2-Tetrachloroethane	5.69	0.50	ug/l	6.00		95	70-130			
1,1,1-Trichloroethane	5.72	0.50	ug/l	6.00		95	70-130			
1,1,2,2-Tetrachloroethane	5.53	0.50	ug/l	6.00		92	70-130			
1,1,2-Trichloroethane	5.37	0.50	ug/l	6.00		90	70-130			
1,1-Dichloroethane	5.39	0.50	ug/l	6.00		90	70-130			
1,1-Dichloroethene	5.40	0.50	ug/l	6.00		90	70-130			
1,1-Dichloropropene	5.75	0.50	ug/l	6.00		96	70-130			
1,2,3-Trichlorobenzene	5.64	0.50	ug/l	6.00		94	70-130			
1,2,3-Trichloropropane	5.58	0.50	ug/l	6.00		93	70-130			
1,2,4-Trichlorobenzene	5.72	0.50	ug/l	6.00		95	70-130			
1,2,4-Trimethylbenzene	5.93	0.50	ug/l	6.00		99	70-130			
1,2-Dichloroethane	5.15	0.50	ug/l	6.00		86	70-130			
1,2-Dichloropropane	5.34	0.50	ug/l	6.00		89	70-130			
1,3,5-Trimethylbenzene	6.01	0.50	ug/l	6.00		100	70-130			
1,3-Dichloropropane	5.35	0.50	ug/l	6.00		89	70-130			
2,2-Dichloropropane	6.87	0.50	ug/l	6.00		114	70-130			
2-Butanone	4.54	4.0	ug/l	6.00		76	70-130			
2-Chloroethyl vinyl ether	5.12	1.0	ug/l	6.00		85	70-130			
2-Chlorotoluene	5.74	0.50	ug/l	6.00		96	70-130			
2-Hexanone	4.65	4.0	ug/l	6.00		78	70-130			
4-Chlorotoluene	5.74	0.50	ug/l	6.00		96	70-130			
4-Methyl-2-pentanone	5.18	5.0	ug/l	6.00		86	70-130			
Benzene	5.54	0.50	ug/l	6.00		92	70-130			
Bromobenzene	5.51	0.50	ug/l	6.00		92	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0956 - EPA 524.2

LCS (W8F0956-BS1) Analyzed: 06/23/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Bromochloromethane	5.41	0.50	ug/l	6.00		90	70-130			
Bromodichloromethane	5.51	0.50	ug/l	6.00		92	70-130			
Bromoform	5.67	0.50	ug/l	6.00		94	70-130			
Bromomethane	6.17	0.50	ug/l	6.00		103	70-130			
Carbon tetrachloride	5.82	0.50	ug/l	6.00		97	70-130			
Chlorobenzene	5.73	0.50	ug/l	6.00		96	70-130			
Chloroethane	5.34	0.50	ug/l	6.00		89	70-130			
Chloroform	5.51	0.50	ug/l	6.00		92	70-130			
Chloromethane	4.90	0.50	ug/l	6.00		82	70-130			
cis-1,2-Dichloroethene	5.35	0.50	ug/l	6.00		89	70-130			
cis-1,3-Dichloropropene	5.62	0.50	ug/l	6.00		94	70-130			
Dibromochloromethane	5.53	0.50	ug/l	6.00		92	70-130			
Dibromomethane	5.31	0.50	ug/l	6.00		88	70-130			
Dichlorodifluoromethane (Freon 12)	4.95	0.50	ug/l	6.00		82	70-130			
Di-isopropyl ether	5.25	3.0	ug/l	6.00		88	70-130			
Ethyl tert-butyl ether	5.15	3.0	ug/l	6.00		86	70-130			
Ethylbenzene	5.91	0.50	ug/l	6.00		98	70-130			
Freon 113	5.58	5.0	ug/l	6.00		93	70-130			
Hexachlorobutadiene	6.14	0.50	ug/l	6.00		102	70-130			
Isopropylbenzene	6.05	0.50	ug/l	6.00		101	70-130			
m,p-Xylene	11.8	1.0	ug/l	12.0		99	70-130			
m-Dichlorobenzene	5.70	0.50	ug/l	6.00		95	70-130			
Methyl tert-butyl ether (MTBE)	5.20	3.0	ug/l	6.00		87	70-130			
Methylene chloride	5.35	0.50	ug/l	6.00		89	70-130			
Naphthalene	5.57	0.50	ug/l	6.00		93	70-130			
n-Butylbenzene	6.16	0.50	ug/l	6.00		103	70-130			
n-Propylbenzene	5.89	0.50	ug/l	6.00		98	70-130			
o-Dichlorobenzene	5.49	0.50	ug/l	6.00		92	70-130			
o-Xylene	5.83	0.50	ug/l	6.00		97	70-130			
p-Dichlorobenzene	5.63	0.50	ug/l	6.00		94	70-130			
p-Isopropyltoluene	6.16	0.50	ug/l	6.00		103	70-130			
sec-Butylbenzene	6.08	0.50	ug/l	6.00		101	70-130			
Styrene	5.92	0.50	ug/l	6.00		99	70-130			

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0956 - EPA 524.2										
LCS (W8F0956-BS1)				Analyzed: 06/23/08						
Tert-amyl methyl ether	5.30	3.0	ug/l	6.00		88	70-130			
tert-Butylbenzene	6.13	0.50	ug/l	6.00		102	70-130			
Tetrachloroethene	5.77	0.50	ug/l	6.00		96	70-130			
Toluene	5.71	0.50	ug/l	6.00		95	70-130			
trans-1,2-Dichloroethene	5.35	0.50	ug/l	6.00		89	70-130			
trans-1,3-Dichloropropene	5.58	0.50	ug/l	6.00		93	70-130			
Trichloroethene	5.51	0.50	ug/l	6.00		92	70-130			
Trichlorofluoromethane	5.67	5.0	ug/l	6.00		94	70-130			
Vinyl chloride	5.15	0.50	ug/l	6.00		86	70-130			
LCS Dup (W8F0956-BSD1)				Analyzed: 06/23/08						
Surrogate: 1,2-Dichlorobenzene-d4	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.92*		*ug/l*	*10.0*		*99*	*70-130*			
1,1,1,2-Tetrachloroethane	5.73	0.50	ug/l	6.00		96	70-130	0.7	30	
1,1,1-Trichloroethane	5.63	0.50	ug/l	6.00		94	70-130	2	30	
1,1,2,2-Tetrachloroethane	5.61	0.50	ug/l	6.00		94	70-130	1	30	
1,1,2-Trichloroethane	5.44	0.50	ug/l	6.00		91	70-130	1	30	
1,1-Dichloroethane	5.42	0.50	ug/l	6.00		90	70-130	0.6	30	
1,1-Dichloroethene	5.34	0.50	ug/l	6.00		89	70-130	1	30	
1,1-Dichloropropene	5.66	0.50	ug/l	6.00		94	70-130	2	30	
1,2,3-Trichlorobenzene	5.90	0.50	ug/l	6.00		98	70-130	5	30	
1,2,3-Trichloropropane	5.41	0.50	ug/l	6.00		90	70-130	3	30	
1,2,4-Trichlorobenzene	5.90	0.50	ug/l	6.00		98	70-130	3	30	
1,2,4-Trimethylbenzene	5.96	0.50	ug/l	6.00		99	70-130	0.5	30	
1,2-Dichloroethane	5.15	0.50	ug/l	6.00		86	70-130	0	30	
1,2-Dichloropropane	5.39	0.50	ug/l	6.00		90	70-130	0.9	30	
1,3,5-Trimethylbenzene	5.98	0.50	ug/l	6.00		100	70-130	0.5	30	
1,3-Dichloropropane	5.47	0.50	ug/l	6.00		91	70-130	2	30	
2,2-Dichloropropane	6.61	0.50	ug/l	6.00		110	70-130	4	30	
2-Butanone	4.66	4.0	ug/l	6.00		78	70-130	3	30	
2-Chloroethyl vinyl ether	5.23	1.0	ug/l	6.00		87	70-130	2	30	
2-Chlorotoluene	5.76	0.50	ug/l	6.00		96	70-130	0.3	30	
2-Hexanone	4.94	4.0	ug/l	6.00		82	70-130	6	30	

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0956 - EPA 524.2

LCS Dup (W8F0956-BSD1) Analyzed: 06/23/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
4-Chlorotoluene	5.80	0.50	ug/l	6.00		97	70-130	1	30	
4-Methyl-2-pentanone	5.13	5.0	ug/l	6.00		86	70-130	1	30	
Benzene	5.58	0.50	ug/l	6.00		93	70-130	0.7	30	
Bromobenzene	5.56	0.50	ug/l	6.00		93	70-130	0.9	30	
Bromochloromethane	5.55	0.50	ug/l	6.00		92	70-130	3	30	
Bromodichloromethane	5.56	0.50	ug/l	6.00		93	70-130	0.9	30	
Bromoform	5.81	0.50	ug/l	6.00		97	70-130	2	30	
Bromomethane	6.17	0.50	ug/l	6.00		103	70-130	0	30	
Carbon tetrachloride	5.71	0.50	ug/l	6.00		95	70-130	2	30	
Chlorobenzene	5.77	0.50	ug/l	6.00		96	70-130	0.7	30	
Chloroethane	5.35	0.50	ug/l	6.00		89	70-130	0.2	30	
Chloroform	5.55	0.50	ug/l	6.00		92	70-130	0.7	30	
Chloromethane	4.92	0.50	ug/l	6.00		82	70-130	0.4	30	
cis-1,2-Dichloroethene	5.42	0.50	ug/l	6.00		90	70-130	1	30	
cis-1,3-Dichloropropene	5.78	0.50	ug/l	6.00		96	70-130	3	30	
Dibromochloromethane	5.60	0.50	ug/l	6.00		93	70-130	1	30	
Dibromomethane	5.42	0.50	ug/l	6.00		90	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	4.75	0.50	ug/l	6.00		79	70-130	4	30	
Di-isopropyl ether	5.41	3.0	ug/l	6.00		90	70-130	3	30	
Ethyl tert-butyl ether	5.33	3.0	ug/l	6.00		89	70-130	3	30	
Ethylbenzene	5.94	0.50	ug/l	6.00		99	70-130	0.5	30	
Freon 113	5.45	5.0	ug/l	6.00		91	70-130	2	30	
Hexachlorobutadiene	6.08	0.50	ug/l	6.00		101	70-130	1	30	
Isopropylbenzene	6.04	0.50	ug/l	6.00		101	70-130	0.2	30	
m,p-Xylene	11.8	1.0	ug/l	12.0		99	70-130	0	30	
m-Dichlorobenzene	5.73	0.50	ug/l	6.00		96	70-130	0.5	30	
Methyl tert-butyl ether (MTBE)	5.44	3.0	ug/l	6.00		91	70-130	5	30	
Methylene chloride	5.44	0.50	ug/l	6.00		91	70-130	2	30	
Naphthalene	5.96	0.50	ug/l	6.00		99	70-130	7	30	
n-Butylbenzene	6.09	0.50	ug/l	6.00		102	70-130	1	30	
n-Propylbenzene	5.85	0.50	ug/l	6.00		98	70-130	0.7	30	
o-Dichlorobenzene	5.58	0.50	ug/l	6.00		93	70-130	2	30	
o-Xylene	5.90	0.50	ug/l	6.00		98	70-130	1	30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0956 - EPA 524.2

LCS Dup (W8F0956-BSD1) Analyzed: 06/23/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
p-Dichlorobenzene	5.76	0.50	ug/l	6.00		96	70-130	2	30	
p-Isopropyltoluene	6.14	0.50	ug/l	6.00		102	70-130	0.3	30	
sec-Butylbenzene	5.98	0.50	ug/l	6.00		100	70-130	2	30	
Styrene	5.95	0.50	ug/l	6.00		99	70-130	0.5	30	
Tert-amyl methyl ether	5.46	3.0	ug/l	6.00		91	70-130	3	30	
tert-Butylbenzene	6.11	0.50	ug/l	6.00		102	70-130	0.3	30	
Tetrachloroethene	5.70	0.50	ug/l	6.00		95	70-130	1	30	
Toluene	5.76	0.50	ug/l	6.00		96	70-130	0.9	30	
trans-1,2-Dichloroethene	5.46	0.50	ug/l	6.00		91	70-130	2	30	
trans-1,3-Dichloropropene	5.69	0.50	ug/l	6.00		95	70-130	2	30	
Trichloroethene	5.48	0.50	ug/l	6.00		91	70-130	0.5	30	
Trichlorofluoromethane	5.50	5.0	ug/l	6.00		92	70-130	3	30	
Vinyl chloride	5.12	0.50	ug/l	6.00		85	70-130	0.6	30	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8062047 Project ID: 27011-07-3200	Date Received: 06/20/08 09:00 Date Reported: 06/30/08 22:02

Notes and Definitions

MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

8062047 1 of 6

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test

PROJECT NUMBER 27011-07-3200

RECORDER ______ (SIGN)

SAMPLERS Vector Eng (PRINT)

Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- A. 40-ml VOA Vial
- B. Glass Liter
- C. Plastic 500-ml
- D. Plastic Liter
- E. Brass Tube
- F. Other 250ml

SAMPLE DESCRIPTION CODES
- A. Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other ______

TAT CODES
- 1. Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB Weck Laboratory

LABORATORY USE ONLY

LAB PROJECT NO. ______

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL	NaOH	Field Filtered (check)	ANALYSIS REQUESTED Cyanide	Alkalinity Total	Bicarb Alkalinity							TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1	6/17	11:30	SCRWA-B 2514-F				C	G				X		X									3						
2	2	↓	14:30	SJ/SC-C 2514-C				↓	↓				X		X									↓						
	3	↓	↓	SCRWA-D 2514-H				↓	↓				X		X									↓						
	4	↓	↓	SCRWA-C 2514-G				↓	↓				X		X									↓						
	5	↓	↓	DI-C 2514 K				↓	↓				X		X									↓						
	6	↓	15:30	SJ/SC-D ↓ D				↓	↓				X		X									↓						
	7	↓	9:00	SJ/SC-C ↓ C				↓	↓							X	X							↓						
	8	↓	↓	SJ/SC-D ↓ D				↓	↓							X	X							↓						
	9	↓	↓	SCRWA-D ↓ H				↓	↓							X	X							↓						
	10	↓	↓	SCRWA-C ↓ G				↓	↓							X	X							↓						
	11	↓	↓	DI-C ↓ K				↓	↓							X	X							↓						
	12																													
	13																													
	14																													
	15																													
	16																													

5.3°

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☒

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Ice box		Susan Stewart	6/19/08		Jane Gmer	6/20/08	9:00

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy REV. 6/02

* Norman Wong informed of high temperature of sample receipt. Log in each sample individually. Provide standard EDD. [illegible]

8062047

2 of 6

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ______ (SIGN)

SAMPLERS Vector Eng (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Week Laboratory

LABORATORY USE ONLY

LAB PROJECT NO. ______

	NO.	DATE	TIME	SAMPLE ID	AVERAGE			Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION				Field Filtered (check)	ANALYSIS REQUESTED								TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
					TEMP °C	COND micromhos/cm	pH			Unpreserved	HNO3	HCL			Perchlorate	Boron	Calcium	Magnesium	Sodium	Potassium	DOC								
1	1	6/16	14:50	SCRWA-B 2514F				F	G	X					X								3						
	2	6/17	14:30	SCRWA-C G						X					X														
	3			SCRWA-D H						X					X														
2	4			SJ/SC-C C						X					X														
	5			DI-C K						X					X														
	6		15:00	SJ/SC-D D						X					X														
	7		9:30	SCRWA-C G							X					X	X	X	X	X									
	8			SCRWA-D H							X					X	X	X	X	X									
2	9			SJ/SC-C C							X					X	X	X	X	X									
	10			DI-C K							X					X	X	X	X	X									
	11		11:00	SJ/SC-D D							X					X	X	X	X	X									
	12	~~6/16~~	~~11:50~~	~~SCRWA-B F~~						~~X~~																			
	13	~~6/16~~	~~11:50~~																										
	14																												
	15																												
	16																												

5.3°C

NOTES / MISCELLANEOUS
Sampled by Vector Eng.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On trac Courier	Ice box		Susan Stewart 6/19/08			Jame Gmor	6/20/08	9:00

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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REV. 6/02

3 of 6

EPA 552.2

8062047

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test

PROJECT NUMBER 27011-07-3200

RECORDER ____ (SIGN)

SAMPLERS Vector (PRINT)

Susan Stewart (SIGN)

C Acid

SAMPLE CONTAINER DESCRIPTION CODES		SAMPLE DESCRIPTION CODES		TAT CODES
A. 40-ml VOA Vial B. Glass Liter C. Plastic 500-ml D. Plastic Liter	E. Brass Tube F. Other 250 ml glass	A. Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment	F. Oil G. Waste H. Blank/Spike I. Other ____	1. Standard 2. 48 Hour 3. 24 Hour 4. Other ____

ANALYTICAL LAB Weck Laboratory

LABORATORY USE ONLY

LAB PROJECT NO. ____

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	NH4 Cl	Field Filtered (check)	Bromochloro Acetic	Dibromo "	Dichloro	Monobromo	Monochloro	Trichloro	DOC			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/16	11:50	SCRWA-B 2514F				F	G	X			X		X	X	X	X	X	X				3						
2	6/17	14:30	SJ/SC-D D				↓	↓	X			X		X	X	X	X	X	X				↓						
3		12:00	SJ/SC C C				↓	↓	X			X		X	X	X	X	X	X				↓						
4		↓	SCRWA-C G				↓	↓	X			X		X	X	X	X	X	X				↓						
5		↓	SCRWA-D H				↓	↓	X			X		X	X	X	X	X	X				↓						
6		↓	DI-C K				↓	↓	X			X		X	X	X	X	X	X				↓						
7	6/16	11:50	SCRWA-B F				↓	↓	X											X			↓						
8	6/17	11:00	SJ/SC-C C				↓	↓	X											X			↓						
9	↓	↓	SJ/SC-D D				↓	↓	X											X			↓						
10	↓	↓	SCRWA-C G				↓	↓	X											X			↓						
11	↓	↓	SCRWA-D H				↓	↓	X											X			↓						
12	↓	↓	DI-C K				↓	↓	X											X			↓						
13																													
14																													
15																													
16																													

5.3°

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Ontrac Courier	Ice chest		Susan Stewart	6/19		Jama Gomez	6/20/08	9:00

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739

☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101

☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ____ TEL ____ FAX ____

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

8062047

4 of 6

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test

PROJECT NUMBER 27011-07-3200

RECORDER ______ (SIGN)

SAMPLERS Vector Eng (PRINT)

Susan Steward (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250 ml plastic

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL		Field Filtered (check)	Sulfate	Nitrate	Nitrite	Chloride	Bromide				TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/17	10:00	SJ/SC-C 2514C				F	G	X					X			X	X				3						
2		11:00	SJ/SC-D D						X					X			X	X										
3		10:00	SCRWA-C G						X					X			X	X										
4		10:00	SCRWA-D H						X					X			X	X										
5	↓	10:00	DI-C ↓ K				↓		X					X			X	X				↓						
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

5.3C

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
OnTrac Courier	Icechest		Susan Steward	6/19/08		Jamie Gomez	6/20/08	9:00

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

5 of 6

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

8062047

(See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ____ (SIGN)
SAMPLERS Vector (PRINT)
____ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ____

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ____

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ____

ANALYTICAL LAB Weck

LABORATORY USE ONLY
LAB PROJECT NO. ____

2 bottles 40ml/each sample

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO₃	HCL	Field Filtered (check)	ANALYSIS REQUESTED VOAs/VOC	Bromochlorom	Bromoform	Chloroform	Carbon Tetrachl	Dibromochloro	Xylenes Total	Additionally 8010	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/17	14:30	SJ/SC-C 2514C				A	G					X	→							3						
2			SJ/SC-C 2514C										X	→													
3			DI-C 2514K										X	→													
4			DI-C 2514K										X	→													
5			SJ/SC-D 2514D										X	→													
6			SJ/SC-D 2514D										X	→													
7			SCRWA-D 2514H										X	→													
8		↓	SCRWA-D 2514H										X	→													
9		14:50	SCRWA-B 2514F										X	→													
10		↓	SCRWA-B 2514F										X	→													
11		14:30	SCRWA-C 2514G										X	→													
12	↓	↓	SCRWA-C 2514G				↓	↓					X	→							↓						
13			~~SS~~																								
14																											
15																											
16																											

5.3 C

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac courier	Ice box		Susan Stewart	6/19/08			6/20/08	9:00

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
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WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

8062047

6 of 6

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test

PROJECT NUMBER 27011-07-3200

RECORDER ______ (SIGN)

SAMPLERS Vector (PRINT)

Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250 ml glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_3PO_4	Field Filtered (check)	ANALYSIS REQUESTED: TOC	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/17	10:30	SJ/SC-C 2514C				F	G				X		X	3						
2	6/17	10:30	SCRWA-C 2514G				F	G				X		X							
3	6/17	10:30	SCRWA-D 2514H				F	G				X		X							
4	6/17	10:30	DI-C 2514K				F	G				X		X							
5	6/17	10:30	SJ/SC-D 2514D				F	G				X		X	↓						
6	6	~~10:30~~																			
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					

1:3

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Ice box		Susan Stewart	6/19/08		Janna Gomer	6/20/08	9:00

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

14859 E. Clark Ave., Industry, CA 91745
Phone 626.336.2139 Fax 626.336.2634
info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client: Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong

Phone: (650) 641-8258
Fax: (650) 960-0739

Report Date: 07/08/08 11:46
Received Date: 06/18/08 09:00
Turn Around: Normal

Work Order #: 8061838

Client Project: Recycled Water

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Norman Wong :

Enclosed are the results of analyses for samples received 06/18/08 09:00 with the Chain of Custody document. The samples were received in good condition. The samples were received at 6.3 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Hai Van Nguyen
Project Manager

WECK LABORATORIES, INC.

Weck Laboratories, Inc.
14859 E. Clark Ave.
Industry, CA 91745
Phone 626.336.2139
Fax 626.336.2634

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
SCRWA-D 2514 H	Vector Engineering		8061838-01	Water	06/09/08 09:00
SJ / SC-D 2514D	Vector Engineering		8061838-02	Water	06/09/08 10:00
SJ / SC-C 2514C	Vector Engineering		8061838-03	Water	06/10/08 10:00
SCRWA-C 2514G	Vector Engineering		8061838-04	Water	06/11/08 13:00
DI-C 2514 K	Vector Engineering		8061838-05	Water	06/12/08 08:00
SCRWA-B 2514 F	Vector Engineering		8061838-06	Water	06/13/08 15:00

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

SCRWA-D 2514 H 8061838-01 (Water) Date 06/09/08 09:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Chloride	**210**	mg/l	5.0	10	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Total Fluoride	**0.26**	mg/l	0.10	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Nitrate as N	ND	ug/l	110	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Sulfate as SO4	**130**	mg/l	5.0	10	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**240**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	**290**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F0792	06/19/08	06/19/08	hml	
Dissolved Organic Carbon	**16**	mg/l	1.5	5	SM5310C	W8F1173	06/27/08	06/27/08	jlp	
Total Organic Carbon (TOC)	**35**	mg/l	1.5	5	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	105	%	*70-130*		*EPA 552.2*	*W8F0797*	*06/19/08*	*06/20/08*	cwn	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8061838 Project ID: Recycled Water	Date Received: 06/18/08 09:00 Date Reported: 07/08/08 11:46

SCRWA-D 2514 H 8061838-01 (Water) Date 06/09/08 09:00

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	380	ug/l	10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Calcium	62	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Potassium	24	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Magnesium	34	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Sodium	140	mg/l	0.50	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0922	06/19/08	06/19/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Butanone	180000	ug/l	50000	10000	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

SCRWA-D 2514 H   8061838-01 (Water)   **Date**   **06/09/08 09:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromodichloromethane	**1.6**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloroform	**6.0**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloromethane	**0.67**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

SCRWA-D 2514 H 8061838-01 (Water) Date 06/09/08 09:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Methylene chloride	**0.78**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Toluene	**0.82**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	98	%	*70-130*		*EPA 524.2*	*W8F0831*	*06/19/08*	*06/19/08*	mdt	
Surrogate: 4-Bromofluorobenzene	97	%	*70-130*		*EPA 524.2*	*W8F0831*	*06/19/08*	*06/19/08*	mdt	

SJ / SC-D 2514D 8061838-02 (Water) Date 06/09/08 10:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Chloride	**200**	mg/l	5.0	10	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Total Fluoride	**0.94**	mg/l	0.10	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Nitrite as N	**3400**	ug/l	150	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

SJ / SC-D 2514D   8061838-02 (Water)   Date   06/09/08 10:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Nitrate as N	ND	ug/l	110	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Sulfate as SO4	**140**	mg/l	5.0	10	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**180**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	**220**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F0792	06/19/08	06/19/08	hml	
Dissolved Organic Carbon	**37**	mg/l	3.0	10	SM5310C	W8F1173	06/27/08	06/27/08	jlp	
Total Organic Carbon (TOC)	**50**	mg/l	3.0	10	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	**5.1**	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Dibromoacetic acid (dbaa)	**1.9**	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Dichloroacetic acid (dcaa)	**9.6**	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Total HAA5	**26**	ug/l	5.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Trichloroacetic acid (tcaa)	**14**	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	111	%	*70-130*		*EPA 552.2*	*W8F0797*	*06/19/08*	*06/20/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	**440**	ug/l	10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Calcium	**57**	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Potassium	**9.3**	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8061838 Project ID: Recycled Water	Date Received: Date Reported:	06/18/08 09:00 07/08/08 11:46

SJ / SC-D 2514D 8061838-02 (Water) Date 06/09/08 10:00

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Magnesium	**41**	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Sodium	**120**	mg/l	0.50	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0922	06/19/08	06/19/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Butanone	**62000**	ug/l	50000	10000	EPA 524.2	W8F0831	06/19/08	06/20/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

SJ / SC-D 2514D 8061838-02 (Water) Date 06/09/08 10:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromodichloromethane	**2.3**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloroform	**2.8**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloromethane	**0.61**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dibromochloromethane	**1.3**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Methylene chloride	**0.60**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8061838 Project ID: Recycled Water	Date Received: 06/18/08 09:00 Date Reported: 07/08/08 11:46

SJ / SC-D 2514D 8061838-02 (Water) **Date** **06/09/08 10:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Toluene	**0.96**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	102	%	*70-130*		*EPA 524.2*	*W8F0831*	*06/19/08*	*06/19/08*	mdt	
Surrogate: 4-Bromofluorobenzene	99	%	*70-130*		*EPA 524.2*	*W8F0831*	*06/19/08*	*06/19/08*	mdt	

SJ / SC-C 2514C 8061838-03 (Water) **Date** **06/10/08 10:00**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Chloride	**210**	mg/l	5.0	10	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Total Fluoride	**0.82**	mg/l	0.10	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Nitrite as N	**180**	ug/l	150	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Nitrate as N	**7400**	ug/l	110	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Sulfate as SO4	**100**	mg/l	5.0	10	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

SJ / SC-C 2514C 8061838-03 (Water) Date 06/10/08 10:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**180**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	**220**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F0792	06/19/08	06/19/08	hml	
Dissolved Organic Carbon	**6.2**	mg/l	0.30	1	SM5310C	W8F1173	06/27/08	06/27/08	jlp	
Total Organic Carbon (TOC)	**6.7**	mg/l	0.30	1	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	**4.8**	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Dibromoacetic acid (dbaa)	**1.8**	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Dichloroacetic acid (dcaa)	**6.4**	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Total HAA5	**20**	ug/l	5.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Trichloroacetic acid (tcaa)	**12**	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	93	%	*70-130*		*EPA 552.2*	*W8F0797*	*06/19/08*	*06/20/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	**430**	ug/l	10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Calcium	**57**	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Potassium	**11**	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Magnesium	**26**	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Sodium	**130**	mg/l	0.50	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

SJ / SC-C 2514C 8061838-03 (Water) Date 06/10/08 10:00

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0922	06/19/08	06/19/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Butanone	**2200**	ug/l	500	100	EPA 524.2	W8F0831	06/19/08	06/23/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

SJ / SC-C 2514C 8061838-03 (Water) **Date** **06/10/08 10:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromodichloromethane	**4.8**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromoform	**0.50**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloroform	**6.7**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dibromochloromethane	**2.5**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

SJ / SC-C 2514C **8061838-03 (Water)** **Date** **06/10/08 10:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Toluene	**0.83**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	105	%	*70-130*		*EPA 524.2*	*W8F0831*	*06/19/08*	*06/19/08*	mdt	
Surrogate: 4-Bromofluorobenzene	103	%	*70-130*		*EPA 524.2*	*W8F0831*	*06/19/08*	*06/19/08*	mdt	

SCRWA-C 2514G **8061838-04 (Water)** **Date** **06/11/08 13:00**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Chloride	**210**	mg/l	5.0	10	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Total Fluoride	**0.21**	mg/l	0.10	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Nitrate as N	**3100**	ug/l	110	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Sulfate as SO4	**89**	mg/l	5.0	10	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**240**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	**290**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8061838 Project ID: Recycled Water	Date Received: Date Reported:	06/18/08 09:00 07/08/08 11:46

SCRWA-C 2514G 8061838-04 (Water) **Date** **06/11/08 13:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F0792	06/19/08	06/19/08	hml	
Dissolved Organic Carbon	24	mg/l	3.0	10	SM5310C	W8F1173	06/27/08	06/27/08	jlp	
Total Organic Carbon (TOC)	84	mg/l	3.0	10	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	103	%	*70-130*		*EPA 552.2*	*W8F0797*	*06/19/08*	*06/20/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	350	ug/l	10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Calcium	75	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Potassium	9.0	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Magnesium	52	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Sodium	91	mg/l	0.50	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0922	06/19/08	06/19/08	mac	

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Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8061838 Project ID: Recycled Water	Date Received: Date Reported:	06/18/08 09:00 07/08/08 11:46

SCRWA-C 2514G 8061838-04 (Water) Date 06/11/08 13:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Butanone	**7300**	ug/l	5000	1000	EPA 524.2	W8F0831	06/19/08	06/20/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromodichloromethane	**5.0**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

SCRWA-C 2514G 8061838-04 (Water) Date **06/11/08 13:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloroform	**20**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dibromochloromethane	**0.94**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

SCRWA-C 2514G 8061838-04 (Water) Date 06/11/08 13:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Toluene	**0.50**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	103	%	*70-130*		*EPA 524.2*	*W8F0831*	*06/19/08*	*06/19/08*	mdt	
Surrogate: 4-Bromofluorobenzene	102	%	*70-130*		*EPA 524.2*	*W8F0831*	*06/19/08*	*06/19/08*	mdt	

DI-C 2514 K 8061838-05 (Water) Date 06/12/08 08:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Chloride	**450**	mg/l	10	20	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Total Fluoride	**0.25**	mg/l	0.10	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Nitrate as N	ND	ug/l	110	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Sulfate as SO4	**5.3**	mg/l	0.50	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**32**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	**39**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8F0913	06/23/08	06/24/08	hml	
Dissolved Organic Carbon	**13**	mg/l	1.5	5	SM5310C	W8F1173	06/27/08	06/27/08	jlp	
Total Organic Carbon (TOC)	**44**	mg/l	1.5	5	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8061838 Project ID: Recycled Water	Date Received: Date Reported:	06/18/08 09:00 07/08/08 11:46

DI-C 2514 K 8061838-05 (Water) **Date** **06/12/08 08:00**

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8F0797	06/19/08	06/20/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	95	%	*70-130*		*EPA 552.2*	*W8F0797*	*06/19/08*	*06/20/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	66	ug/l	10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Calcium	64	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Potassium	1.7	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Magnesium	34	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Sodium	150	mg/l	0.50	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0922	06/19/08	06/19/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

DI-C 2514 K 8061838-05 (Water) Date 06/12/08 08:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Butanone	**6400**	ug/l	1000	200	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloroform	**0.84**	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8061838 Project ID: Recycled Water	Date Received: 06/18/08 09:00 Date Reported: 07/08/08 11:46

DI-C 2514 K 8061838-05 (Water) **Date** **06/12/08 08:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	

DI-C 2514 K 8061838-05 (Water) Date 06/12/08 08:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8F0831	06/19/08	06/19/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	104	%	*70-130*		*EPA 524.2*	*W8F0831*	*06/19/08*	*06/19/08*	mdt	
Surrogate: 4-Bromofluorobenzene	99	%	*70-130*		*EPA 524.2*	*W8F0831*	*06/19/08*	*06/19/08*	mdt	

SCRWA-B 2514 F 8061838-06 (Water) Date 06/13/08 15:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Chloride	**210**	mg/l	5.0	10	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Total Fluoride	**0.21**	mg/l	0.10	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	
Nitrite as N	**230**	ug/l	150	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Nitrate as N	**2400**	ug/l	110	1	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	O-09
Sulfate as SO4	**92**	mg/l	5.0	10	EPA 300.0	W8F0863	06/19/08	06/19/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**340**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Bicarbonate Alkalinity as HCO3	**410**	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0895	06/23/08	06/23/08	png	
Total Organic Carbon (TOC)	**23**	mg/l	1.2	4	SM5310C	W8F1062	06/25/08	06/25/08	jlp	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	**400**	ug/l	10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Calcium	**110**	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Potassium	**1.1**	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	
Magnesium	**71**	mg/l	0.10	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

SCRWA-B 2514 F **8061838-06 (Water)** **Date** **06/13/08 15:00**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Sodium	**24**	mg/l	0.50	1	EPA 200.7	W8F0793	06/19/08	06/27/08	jba	

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QUALITY CONTROL SECTION

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Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0863 - EPA 300.0/300.1										
Blank (W8F0863-BLK1)				Analyzed: 06/19/08						
Bromide	ND	0.50	mg/l							
Chloride	ND	0.50	mg/l							
Nitrate as N	ND	110	ug/l							
Nitrite as N	ND	150	ug/l							
Sulfate as SO4	ND	0.50	mg/l							
Total Fluoride	ND	0.10	mg/l							
LCS (W8F0863-BS1)				Analyzed: 06/19/08						
Bromide	8.71	0.50	mg/l	8.00		109	90-110			
Chloride	4.13	0.50	mg/l	4.00		103	90-110			
Nitrate as N	1850	110	ug/l	1810		102	90-110			
Nitrite as N	598	150	ug/l	608		98	90-110			
Sulfate as SO4	8.11	0.50	mg/l	8.00		101	90-110			
Total Fluoride	2.03	0.10	mg/l	2.00		101	90-110			
Matrix Spike (W8F0863-MS1)	**Source: 8061801-02**			Analyzed: 06/19/08						
Bromide	86.0	5.0	mg/l	80.0	ND	107	83-113			
Chloride	130	5.0	mg/l	40.0	90.8	97	72-118			
Nitrate as N	18300	1100	ug/l	18100	18.0	101	80-107			
Nitrite as N	6370	1500	ug/l	6080	ND	105	86-111			
Sulfate as SO4	81.9	5.0	mg/l	80.0	1.64	100	84-114			
Total Fluoride	19.6	1.0	mg/l	20.0	0.359	96	79-109			
Matrix Spike (W8F0863-MS2)	**Source: 8061802-03**			Analyzed: 06/19/08						
Bromide	85.9	5.0	mg/l	80.0	ND	107	83-113			
Chloride	177	5.0	mg/l	40.0	135	105	72-118			
Nitrate as N	18200	1100	ug/l	18100	ND	101	80-107			
Nitrite as N	6370	1500	ug/l	6080	ND	105	86-111			
Sulfate as SO4	80.4	5.0	mg/l	80.0	0.947	99	84-114			
Total Fluoride	19.8	1.0	mg/l	20.0	0.356	97	79-109			

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0863 - EPA 300.0/300.1										
Matrix Spike Dup (W8F0863-MSD1)	**Source: 8061801-02**		Analyzed: 06/19/08							
Bromide	86.5	5.0	mg/l	80.0	ND	108	83-113	0.6	20	
Chloride	129	5.0	mg/l	40.0	90.8	95	72-118	0.7	20	
Nitrate as N	18300	1100	ug/l	18100	18.0	101	80-107	0.2	20	
Nitrite as N	6330	1500	ug/l	6080	ND	104	86-111	0.6	20	
Sulfate as SO4	81.4	5.0	mg/l	80.0	1.64	100	84-114	0.6	20	
Total Fluoride	19.8	1.0	mg/l	20.0	0.359	97	79-109	0.9	20	
Matrix Spike Dup (W8F0863-MSD2)	**Source: 8061802-03**		Analyzed: 06/19/08							
Bromide	85.8	5.0	mg/l	80.0	ND	107	83-113	0.1	20	
Chloride	175	5.0	mg/l	40.0	135	102	72-118	0.8	20	
Nitrate as N	18100	1100	ug/l	18100	ND	100	80-107	0.7	20	
Nitrite as N	6560	1500	ug/l	6080	ND	108	86-111	3	20	
Sulfate as SO4	80.1	5.0	mg/l	80.0	0.947	99	84-114	0.4	20	
Total Fluoride	19.7	1.0	mg/l	20.0	0.356	97	79-109	0.4	20	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0792 - General Preparation										
Blank (W8F0792-BLK1)				Analyzed: 06/19/08						
Total Cyanide	ND	5.0	ug/l							
LCS (W8F0792-BS1)				Analyzed: 06/19/08						
Total Cyanide	51.0	5.0	ug/l	50.0		102	90-110			
Matrix Spike (W8F0792-MS1)		**Source: 8061838-01**		Analyzed: 06/19/08						
Total Cyanide	29.6	5.0	ug/l	50.0	ND	59	90-110			MS-01
Matrix Spike Dup (W8F0792-MSD1)		**Source: 8061838-01**		Analyzed: 06/19/08						
Total Cyanide	33.9	5.0	ug/l	50.0	ND	68	90-110	14	20	MS-01
Batch W8F0895 - General Preparation										
Blank (W8F0895-BLK1)				Analyzed: 06/23/08						
Alkalinity as CaCO3	ND	2.0	mg/l							
Bicarbonate Alkalinity as HCO3	ND	2.0	mg/l							
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l							
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l							
LCS (W8F0895-BS1)				Analyzed: 06/23/08						
Alkalinity as CaCO3	44.2	2.0	mg/l	45.3		98	94-108			
Bicarbonate Alkalinity as HCO3	53.9	2.0	mg/l	55.3		98	94-108			
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Duplicate (W8F0895-DUP1)		**Source: 8062108-01**		Analyzed: 06/23/08						
Alkalinity as CaCO3	185	2.0	mg/l		185			0	15	
Bicarbonate Alkalinity as HCO3	226	2.0	mg/l		226			0	15	
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0913 - General Preparation										
Blank (W8F0913-BLK1)				Analyzed: 06/24/08						
Total Cyanide	ND	5.0	ug/l							
LCS (W8F0913-BS1)				Analyzed: 06/24/08						
Total Cyanide	52.0	5.0	ug/l	50.0		104	90-110			
Matrix Spike (W8F0913-MS1)		**Source: 8061231-01**		Analyzed: 06/24/08						
Total Cyanide	48.8	5.0	ug/l	50.0	ND	98	90-110			
Matrix Spike (W8F0913-MS2)		**Source: 8061838-05**		Analyzed: 06/24/08						
Total Cyanide	46.0	5.0	ug/l	50.0	ND	92	90-110			
Matrix Spike Dup (W8F0913-MSD1)		**Source: 8061231-01**		Analyzed: 06/24/08						
Total Cyanide	40.3	5.0	ug/l	50.0	ND	81	90-110	19	20	MS-01
Matrix Spike Dup (W8F0913-MSD2)		**Source: 8061838-05**		Analyzed: 06/24/08						
Total Cyanide	44.4	5.0	ug/l	50.0	ND	89	90-110	4	20	MS-01
Batch W8F1062 - SM5310										
Blank (W8F1062-BLK1)				Analyzed: 06/25/08						
Total Organic Carbon (TOC)	ND	0.30	mg/l							
LCS (W8F1062-BS1)				Analyzed: 06/25/08						
Total Organic Carbon (TOC)	4.73	0.30	mg/l	5.00		95	90-110			
Matrix Spike (W8F1062-MS1)		**Source: 8062047-49**		Analyzed: 06/25/08						
Total Organic Carbon (TOC)	5.01	0.30	mg/l	5.00	0.683	86	84-107			

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F1062 - SM5310										
Matrix Spike Dup (W8F1062-MSD1)	**Source: 8062047-49**			Analyzed: 06/25/08						
Total Organic Carbon (TOC)	4.96	0.30	mg/l	5.00	0.683	86	84-107	0.9	20	
Batch W8F1173 - SM5310										
Blank (W8F1173-BLK1)				Analyzed: 06/27/08						
Dissolved Organic Carbon	ND	0.30	mg/l							
LCS (W8F1173-BS1)				Analyzed: 06/27/08						
Dissolved Organic Carbon	4.80	0.30	mg/l	5.00		96	80-120			
LCS Dup (W8F1173-BSD1)				Analyzed: 06/27/08						
Dissolved Organic Carbon	4.78	0.30	mg/l	5.00		96	80-120	0.4	20	

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HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0797 - EPA 500 Series										
Blank (W8F0797-BLK1)				Analyzed: 06/24/08						
Surrogate: 2,3-Dibromopropionic acid	*9.52*		*ug/l*	*10.0*		*95*	*70-130*			
Bromochloroacetic acid (bcaa)	ND	1.0	ug/l							
Dibromoacetic acid (dbaa)	ND	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	2.0	ug/l							
Total HAA5	ND	5.0	ug/l							
Trichloroacetic acid (tcaa)	ND	1.0	ug/l							
LCS (W8F0797-BS1)				Analyzed: 06/24/08						
Surrogate: 2,3-Dibromopropionic acid	*10.9*		*ug/l*	*10.0*		*109*	*70-130*			
Bromochloroacetic acid (bcaa)	10.7	1.0	ug/l	10.0		107	70-130			
Dibromoacetic acid (dbaa)	10.6	1.0	ug/l	10.0		106	70-130			
Dichloroacetic acid (dcaa)	10.6	1.0	ug/l	10.0		106	70-130			
Monobromoacetic acid (mbaa)	10.5	1.0	ug/l	10.0		105	70-130			
Monochloroacetic acid (mcaa)	9.46	2.0	ug/l	10.0		95	70-130			
Trichloroacetic acid (tcaa)	10.2	1.0	ug/l	10.0		102	70-130			
Matrix Spike (W8F0797-MS1)	**Source: 8061403-01**			Analyzed: 06/20/08						
Surrogate: 2,3-Dibromopropionic acid	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
Bromochloroacetic acid (bcaa)	13.3	1.0	ug/l	10.0	2.81	105	70-130			
Dibromoacetic acid (dbaa)	10.6	1.0	ug/l	10.0	ND	106	70-130			
Dichloroacetic acid (dcaa)	24.2	1.0	ug/l	10.0	14.7	95	70-130			
Monobromoacetic acid (mbaa)	11.6	1.0	ug/l	10.0	ND	116	70-130			
Monochloroacetic acid (mcaa)	5.33	2.0	ug/l	10.0	ND	53	70-130			MS-05
Trichloroacetic acid (tcaa)	29.6	1.0	ug/l	10.0	20.4	92	70-130			
Matrix Spike (W8F0797-MS2)	**Source: 8061838-01**			Analyzed: 06/20/08						
Surrogate: 2,3-Dibromopropionic acid	*11.6*		*ug/l*	*10.0*		*116*	*70-130*			
Bromochloroacetic acid (bcaa)	11.9	1.0	ug/l	10.0	ND	119	70-130			
Dibromoacetic acid (dbaa)	13.9	1.0	ug/l	10.0	ND	139	70-130			MS-05
Dichloroacetic acid (dcaa)	12.6	1.0	ug/l	10.0	ND	126	70-130			
Monobromoacetic acid (mbaa)	7.14	1.0	ug/l	10.0	ND	71	70-130			

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0797 - EPA 500 Series										
Matrix Spike (W8F0797-MS2)		**Source: 8061838-01**		Analyzed: 06/20/08						
Monochloroacetic acid (mcaa)	10.4	2.0	ug/l	10.0	ND	104	70-130			
Trichloroacetic acid (tcaa)	11.5	1.0	ug/l	10.0	ND	115	70-130			
Matrix Spike Dup (W8F0797-MSD1)		**Source: 8061403-01**		Analyzed: 06/20/08						
Surrogate: 2,3-Dibromopropionic acid	*9.52*		*ug/l*	*10.0*		*95*	*70-130*			
Bromochloroacetic acid (bcaa)	12.8	1.0	ug/l	10.0	2.81	100	70-130	4	30	
Dibromoacetic acid (dbaa)	10.2	1.0	ug/l	10.0	ND	102	70-130	4	30	
Dichloroacetic acid (dcaa)	23.1	1.0	ug/l	10.0	14.7	84	70-130	5	30	
Monobromoacetic acid (mbaa)	11.6	1.0	ug/l	10.0	ND	116	70-130	0.2	30	
Monochloroacetic acid (mcaa)	5.32	2.0	ug/l	10.0	ND	53	70-130	0.2	30	MS-05
Trichloroacetic acid (tcaa)	28.1	1.0	ug/l	10.0	20.4	76	70-130	5	30	
Matrix Spike Dup (W8F0797-MSD2)		**Source: 8061838-01**		Analyzed: 06/20/08						
Surrogate: 2,3-Dibromopropionic acid	*11.4*		*ug/l*	*10.0*		*114*	*70-130*			
Bromochloroacetic acid (bcaa)	11.6	1.0	ug/l	10.0	ND	116	70-130	3	30	
Dibromoacetic acid (dbaa)	14.3	1.0	ug/l	10.0	ND	143	70-130	3	30	MS-05
Dichloroacetic acid (dcaa)	11.5	1.0	ug/l	10.0	ND	115	70-130	9	30	
Monobromoacetic acid (mbaa)	6.95	1.0	ug/l	10.0	ND	70	70-130	3	30	
Monochloroacetic acid (mcaa)	9.57	2.0	ug/l	10.0	ND	96	70-130	9	30	
Trichloroacetic acid (tcaa)	11.1	1.0	ug/l	10.0	ND	111	70-130	4	30	

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0793 - EPA 200.2										
Blank (W8F0793-BLK1)				Analyzed: 06/27/08						
Calcium	ND	0.10	mg/l							
Magnesium	ND	0.10	mg/l							
Potassium	ND	0.10	mg/l							
Sodium	ND	0.50	mg/l							
Total Boron	ND	10	ug/l							
LCS (W8F0793-BS1)				Analyzed: 06/27/08						
Calcium	49.1	0.10	mg/l	50.2		98	85-115			
Magnesium	50.4	0.10	mg/l	50.2		100	85-115			
Potassium	50.0	0.10	mg/l	52.0		96	85-115			
Sodium	49.6	0.50	mg/l	50.2		99	85-115			
Total Boron	197	10	ug/l	200		99	85-115			
Matrix Spike (W8F0793-MS1)	**Source: 8061819-01**			Analyzed: 06/27/08						
Calcium	231	0.10	mg/l	50.2	184	93	70-130			
Magnesium	84.9	0.10	mg/l	50.2	34.6	100	70-130			
Potassium	73.3	0.10	mg/l	52.0	21.2	100	70-130			
Sodium	169	0.50	mg/l	50.2	122	93	70-130			
Total Boron	2230	10	ug/l	200	2050	94	70-130			
Matrix Spike (W8F0793-MS2)	**Source: 8061838-01**			Analyzed: 06/27/08						
Calcium	106	0.10	mg/l	50.2	62.0	88	70-130			
Magnesium	81.7	0.10	mg/l	50.2	33.6	96	70-130			
Potassium	74.0	0.10	mg/l	52.0	24.3	96	70-130			
Sodium	180	0.50	mg/l	50.2	136	89	70-130			
Total Boron	562	10	ug/l	200	383	89	70-130			
Matrix Spike Dup (W8F0793-MSD1)	**Source: 8061819-01**			Analyzed: 06/27/08						
Calcium	235	0.10	mg/l	50.2	184	100	70-130	2	30	
Magnesium	86.5	0.10	mg/l	50.2	34.6	103	70-130	2	30	
Potassium	74.8	0.10	mg/l	52.0	21.2	103	70-130	2	30	
Sodium	176	0.50	mg/l	50.2	122	108	70-130	4	30	
Total Boron	2270	10	ug/l	200	2050	113	70-130	2	30	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8061838
Project ID: Recycled Water

Date Received: 06/18/08 09:00
Date Reported: 07/08/08 11:46

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0793 - EPA 200.2										
Matrix Spike Dup (W8F0793-MSD2)	**Source: 8061838-01**		Analyzed: 06/27/08							
Calcium	107	0.10	mg/l	50.2	62.0	90	70-130	0.7	30	
Magnesium	82.2	0.10	mg/l	50.2	33.6	97	70-130	0.6	30	
Potassium	74.6	0.10	mg/l	52.0	24.3	97	70-130	0.7	30	
Sodium	184	0.50	mg/l	50.2	136	97	70-130	2	30	
Total Boron	570	10	ug/l	200	383	93	70-130	1	30	

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Perchlorate by EPA 314.0 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0922 - EPA 314.0, dir. inj.										
Blank (W8F0922-BLK1)				Analyzed: 06/19/08						
Perchlorate	ND	4.0	ug/l							
LCS (W8F0922-BS1)				Analyzed: 06/19/08						
Perchlorate	18.1	4.0	ug/l	20.0		91	85-115			
Matrix Spike (W8F0922-MS1)		**Source: 8061741-02**		Analyzed: 06/19/08						
Perchlorate	29.5	4.0	ug/l	20.0	12.5	85	80-120			
Matrix Spike Dup (W8F0922-MSD1)		**Source: 8061741-02**		Analyzed: 06/19/08						
Perchlorate	29.2	4.0	ug/l	20.0	12.5	83	80-120	1	15	

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0831 - EPA 524.2

Blank (W8F0831-BLK1) Analyzed: 06/19/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	*9.99*		*ug/l*	*10.0*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.93*		*ug/l*	*10.0*		*99*	*70-130*			
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
1,1-Dichloropropene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3 Dichloropropene (Total)	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	0.50	ug/l							
2-Butanone	ND	5.0	ug/l							
2-Chloroethyl vinyl ether	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
4-Methyl-2-pentanone	ND	5.0	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	0.50	ug/l							
Bromomethane	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0831 - EPA 524.2

Blank (W8F0831-BLK1) Analyzed: 06/19/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	0.50	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l							
Di-isopropyl ether	ND	3.0	ug/l							
Ethyl tert-butyl ether	ND	3.0	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Freon 113	ND	5.0	ug/l							
Hexachlorobutadiene	ND	0.50	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
m,p-Xylene	ND	1.0	ug/l							
m-Dichlorobenzene	ND	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	3.0	ug/l							
Methylene chloride	ND	0.50	ug/l							
Naphthalene	ND	0.50	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
o-Dichlorobenzene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
p-Dichlorobenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
Tert-amyl methyl ether	ND	3.0	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0831 - EPA 524.2

Blank (W8F0831-BLK1) Analyzed: 06/19/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes (total)	ND	0.50	ug/l							

LCS (W8F0831-BS1) Analyzed: 06/19/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	*10.6*		*ug/l*	*10.0*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
1,1,1,2-Tetrachloroethane	5.92	0.50	ug/l	6.00		99	70-130			
1,1,1-Trichloroethane	5.85	0.50	ug/l	6.00		98	70-130			
1,1,2,2-Tetrachloroethane	5.67	0.50	ug/l	6.00		94	70-130			
1,1,2-Trichloroethane	5.50	0.50	ug/l	6.00		92	70-130			
1,1-Dichloroethane	5.78	0.50	ug/l	6.00		96	70-130			
1,1-Dichloroethene	5.60	0.50	ug/l	6.00		93	70-130			
1,1-Dichloropropene	5.75	0.50	ug/l	6.00		96	70-130			
1,2,3-Trichlorobenzene	5.67	0.50	ug/l	6.00		94	70-130			
1,2,3-Trichloropropane	5.70	0.50	ug/l	6.00		95	70-130			
1,2,4-Trichlorobenzene	5.72	0.50	ug/l	6.00		95	70-130			
1,2,4-Trimethylbenzene	6.18	0.50	ug/l	6.00		103	70-130			
1,2-Dichloroethane	5.54	0.50	ug/l	6.00		92	70-130			
1,2-Dichloropropane	5.66	0.50	ug/l	6.00		94	70-130			
1,3,5-Trimethylbenzene	6.20	0.50	ug/l	6.00		103	70-130			
1,3-Dichloropropane	5.50	0.50	ug/l	6.00		92	70-130			
2,2-Dichloropropane	5.72	0.50	ug/l	6.00		95	70-130			
2-Butanone	4.95	4.0	ug/l	6.00		82	70-130			
2-Chloroethyl vinyl ether	4.85	1.0	ug/l	6.00		81	70-130			
2-Chlorotoluene	6.06	0.50	ug/l	6.00		101	70-130			
2-Hexanone	4.61	4.0	ug/l	6.00		77	70-130			
4-Chlorotoluene	6.01	0.50	ug/l	6.00		100	70-130			
4-Methyl-2-pentanone	5.23	5.0	ug/l	6.00		87	70-130			
Acetone	4.49	4.0	ug/l	6.00		75	70-130			
Benzene	5.80	0.50	ug/l	6.00		97	70-130			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0831 - EPA 524.2

LCS (W8F0831-BS1) Analyzed: 06/19/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Bromobenzene	5.83	0.50	ug/l	6.00		97	70-130			
Bromochloromethane	5.67	0.50	ug/l	6.00		94	70-130			
Bromodichloromethane	5.74	0.50	ug/l	6.00		96	70-130			
Bromoform	5.80	0.50	ug/l	6.00		97	70-130			
Bromomethane	6.24	0.50	ug/l	6.00		104	70-130			
Carbon Disulfide	5.66	0.50	ug/l	6.00		94	70-130			
Carbon tetrachloride	5.83	0.50	ug/l	6.00		97	70-130			
Chlorobenzene	5.95	0.50	ug/l	6.00		99	70-130			
Chloroethane	5.74	0.50	ug/l	6.00		96	70-130			
Chloroform	5.83	0.50	ug/l	6.00		97	70-130			
Chloromethane	5.35	0.50	ug/l	6.00		89	70-130			
cis-1,2-Dichloroethene	5.73	0.50	ug/l	6.00		96	70-130			
cis-1,3-Dichloropropene	5.76	0.50	ug/l	6.00		96	70-130			
Dibromochloromethane	5.65	0.50	ug/l	6.00		94	70-130			
Dibromomethane	5.53	0.50	ug/l	6.00		92	70-130			
Dichlorodifluoromethane (Freon 12)	4.99	0.50	ug/l	6.00		83	70-130			
Di-isopropyl ether	5.58	3.0	ug/l	6.00		93	70-130			
Ethyl tert-butyl ether	5.33	3.0	ug/l	6.00		89	70-130			
Ethylbenzene	6.09	0.50	ug/l	6.00		102	70-130			
Freon 113	5.35	5.0	ug/l	6.00		89	70-130			
Hexachlorobutadiene	5.95	0.50	ug/l	6.00		99	70-130			
Isopropylbenzene	6.13	0.50	ug/l	6.00		102	70-130			
m,p-Xylene	12.4	1.0	ug/l	12.0		103	70-130			
m-Dichlorobenzene	5.88	0.50	ug/l	6.00		98	70-130			
Methyl tert-butyl ether (MTBE)	5.28	3.0	ug/l	6.00		88	70-130			
Methylene chloride	5.59	0.50	ug/l	6.00		93	70-130			
Naphthalene	5.40	0.50	ug/l	6.00		90	70-130			
n-Butylbenzene	6.29	0.50	ug/l	6.00		105	70-130			
n-Propylbenzene	6.08	0.50	ug/l	6.00		101	70-130			
o-Dichlorobenzene	5.72	0.50	ug/l	6.00		95	70-130			
o-Xylene	6.08	0.50	ug/l	6.00		101	70-130			
p-Dichlorobenzene	5.85	0.50	ug/l	6.00		98	70-130			
p-Isopropyltoluene	6.27	0.50	ug/l	6.00		104	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0831 - EPA 524.2										
LCS (W8F0831-BS1)				Analyzed: 06/19/08						
sec-Butylbenzene	6.13	0.50	ug/l	6.00		102	70-130			
Styrene	6.15	0.50	ug/l	6.00		102	70-130			
Tert-amyl methyl ether	5.39	3.0	ug/l	6.00		90	70-130			
tert-Butylbenzene	6.17	0.50	ug/l	6.00		103	70-130			
Tetrachloroethene	5.73	0.50	ug/l	6.00		96	70-130			
Toluene	5.93	0.50	ug/l	6.00		99	70-130			
trans-1,2-Dichloroethene	5.75	0.50	ug/l	6.00		96	70-130			
trans-1,3-Dichloropropene	5.73	0.50	ug/l	6.00		96	70-130			
Trichloroethene	5.67	0.50	ug/l	6.00		94	70-130			
Trichlorofluoromethane	5.69	5.0	ug/l	6.00		95	70-130			
Vinyl chloride	5.37	0.50	ug/l	6.00		90	70-130			
LCS Dup (W8F0831-BSD1)				Analyzed: 06/19/08						
Surrogate: 1,2-Dichlorobenzene-d4	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.4*		*ug/l*	*10.0*		*104*	*70-130*			
1,1,1,2-Tetrachloroethane	5.88	0.50	ug/l	6.00		98	70-130	0.7	30	
1,1,1-Trichloroethane	5.98	0.50	ug/l	6.00		100	70-130	2	30	
1,1,2,2-Tetrachloroethane	5.65	0.50	ug/l	6.00		94	70-130	0.4	30	
1,1,2-Trichloroethane	5.47	0.50	ug/l	6.00		91	70-130	0.5	30	
1,1-Dichloroethane	5.77	0.50	ug/l	6.00		96	70-130	0.2	30	
1,1-Dichloroethene	5.86	0.50	ug/l	6.00		98	70-130	5	30	
1,1-Dichloropropene	6.09	0.50	ug/l	6.00		102	70-130	6	30	
1,2,3-Trichlorobenzene	5.88	0.50	ug/l	6.00		98	70-130	4	30	
1,2,3-Trichloropropane	5.63	0.50	ug/l	6.00		94	70-130	1	30	
1,2,4-Trichlorobenzene	5.82	0.50	ug/l	6.00		97	70-130	2	30	
1,2,4-Trimethylbenzene	6.15	0.50	ug/l	6.00		102	70-130	0.5	30	
1,2-Dichloroethane	5.48	0.50	ug/l	6.00		91	70-130	1	30	
1,2-Dichloropropane	5.63	0.50	ug/l	6.00		94	70-130	0.5	30	
1,3,5-Trimethylbenzene	6.25	0.50	ug/l	6.00		104	70-130	0.8	30	
1,3-Dichloropropane	5.55	0.50	ug/l	6.00		92	70-130	0.9	30	
2,2-Dichloropropane	5.96	0.50	ug/l	6.00		99	70-130	4	30	
2-Butanone	4.95	4.0	ug/l	6.00		82	70-130	0	30	
2-Chloroethyl vinyl ether	5.08	1.0	ug/l	6.00		85	70-130	5	30	

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0831 - EPA 524.2

LCS Dup (W8F0831-BSD1) Analyzed: 06/19/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
2-Chlorotoluene	5.98	0.50	ug/l	6.00		100	70-130	1	30	
2-Hexanone	4.93	4.0	ug/l	6.00		82	70-130	7	30	
4-Chlorotoluene	5.98	0.50	ug/l	6.00		100	70-130	0.5	30	
4-Methyl-2-pentanone	5.28	5.0	ug/l	6.00		88	70-130	1	30	
Acetone	4.43	4.0	ug/l	6.00		74	70-130	1	30	
Benzene	5.82	0.50	ug/l	6.00		97	70-130	0.3	30	
Bromobenzene	5.79	0.50	ug/l	6.00		96	70-130	0.7	30	
Bromochloromethane	5.58	0.50	ug/l	6.00		93	70-130	2	30	
Bromodichloromethane	5.71	0.50	ug/l	6.00		95	70-130	0.5	30	
Bromoform	5.79	0.50	ug/l	6.00		96	70-130	0.2	30	
Bromomethane	6.27	0.50	ug/l	6.00		104	70-130	0.5	30	
Carbon Disulfide	5.84	0.50	ug/l	6.00		97	70-130	3	30	
Carbon tetrachloride	6.20	0.50	ug/l	6.00		103	70-130	6	30	
Chlorobenzene	5.90	0.50	ug/l	6.00		98	70-130	0.8	30	
Chloroethane	5.86	0.50	ug/l	6.00		98	70-130	2	30	
Chloroform	5.80	0.50	ug/l	6.00		97	70-130	0.5	30	
Chloromethane	5.36	0.50	ug/l	6.00		89	70-130	0.2	30	
cis-1,2-Dichloroethene	5.74	0.50	ug/l	6.00		96	70-130	0.2	30	
cis-1,3-Dichloropropene	5.79	0.50	ug/l	6.00		96	70-130	0.5	30	
Dibromochloromethane	5.63	0.50	ug/l	6.00		94	70-130	0.4	30	
Dibromomethane	5.61	0.50	ug/l	6.00		94	70-130	1	30	
Dichlorodifluoromethane (Freon 12)	5.38	0.50	ug/l	6.00		90	70-130	8	30	
Di-isopropyl ether	5.58	3.0	ug/l	6.00		93	70-130	0	30	
Ethyl tert-butyl ether	5.46	3.0	ug/l	6.00		91	70-130	2	30	
Ethylbenzene	6.13	0.50	ug/l	6.00		102	70-130	0.7	30	
Freon 113	5.84	5.0	ug/l	6.00		97	70-130	9	30	
Hexachlorobutadiene	6.29	0.50	ug/l	6.00		105	70-130	6	30	
Isopropylbenzene	6.30	0.50	ug/l	6.00		105	70-130	3	30	
m,p-Xylene	12.4	1.0	ug/l	12.0		103	70-130	0.3	30	
m-Dichlorobenzene	5.79	0.50	ug/l	6.00		96	70-130	2	30	
Methyl tert-butyl ether (MTBE)	5.46	3.0	ug/l	6.00		91	70-130	3	30	
Methylene chloride	5.62	0.50	ug/l	6.00		94	70-130	0.5	30	
Naphthalene	5.74	0.50	ug/l	6.00		96	70-130	6	30	

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8F0831 - EPA 524.2

LCS Dup (W8F0831-BSD1) Analyzed: 06/19/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
n-Butylbenzene	6.44	0.50	ug/l	6.00		107	70-130	2	30	
n-Propylbenzene	6.17	0.50	ug/l	6.00		103	70-130	1	30	
o-Dichlorobenzene	5.63	0.50	ug/l	6.00		94	70-130	2	30	
o-Xylene	6.05	0.50	ug/l	6.00		101	70-130	0.5	30	
p-Dichlorobenzene	5.76	0.50	ug/l	6.00		96	70-130	2	30	
p-Isopropyltoluene	6.42	0.50	ug/l	6.00		107	70-130	2	30	
sec-Butylbenzene	6.31	0.50	ug/l	6.00		105	70-130	3	30	
Styrene	6.11	0.50	ug/l	6.00		102	70-130	0.7	30	
Tert-amyl methyl ether	5.53	3.0	ug/l	6.00		92	70-130	3	30	
tert-Butylbenzene	6.32	0.50	ug/l	6.00		105	70-130	2	30	
Tetrachloroethene	5.93	0.50	ug/l	6.00		99	70-130	3	30	
Toluene	5.97	0.50	ug/l	6.00		100	70-130	0.7	30	
trans-1,2-Dichloroethene	5.82	0.50	ug/l	6.00		97	70-130	1	30	
trans-1,3-Dichloropropene	5.75	0.50	ug/l	6.00		96	70-130	0.3	30	
Trichloroethene	5.70	0.50	ug/l	6.00		95	70-130	0.5	30	
Trichlorofluoromethane	6.08	5.0	ug/l	6.00		101	70-130	7	30	
Vinyl chloride	5.64	0.50	ug/l	6.00		94	70-130	5	30	

Notes and Definitions

O-09	This sample was received with the EPA recommended holding time expired.
MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

8061838 1 of 4

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER: 27011-07-3200
RECORDER: ____ (SIGN)

SAMPLERS: Vector Eng. (PRINT)
Susan Steward (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial (2x)
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F.] Other 250ml glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ____

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ____

ANALYTICAL LAB: Weck Laboratories Inc.

LABORATORY USE ONLY
LAB PROJECT NO. ____

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	Field Filtered (check)	ANALYSIS REQUESTED: 552.2 NH_4Cl	ANALYSIS REQUESTED: 524 Ascorbic/HCl	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/9	9:00	SCRWA-D 2514 H				F	G					X		3	14day					
2	6/9	10:00	SJ/SC-D 2514 D				F	G					X		3						
3	6/10	16:00	SJ/SC-C 2514 C				F	G					X		3						
4	6/11	13:00	SCRWA-C 2514 G				F	G					X		3						
5	6/12	8:00	DI-C 2514 K				F	G					X		3						
6	6/9	9:00	SCRWA-D 2514 H				A	G						X	3	14day					
7	6/9	10:00	SJ/SC-D 2514 D				A	G						X	3						
8	6/10	11:00	SJ/SC-C 2514 C				A	G						X	3						
9	6/11	13:00	SCRWA-C 2514 G				A	G						X	3						
10	6/12	8:00	DI-C 2514 K				A	G						X	3						
11																					
12																					
13																					
14																					
15																					
16																					

NOTES / MISCELLANEOUS
Project # 27011-07-3200 (Locus)
Sampled by: Vector Engineering

Container Sealed with Custody Seal: Yes ☐ No ☐

Field / Container Temp.

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On-Trac Courier	Ice chest		Susan Steward	6/17/08			6-18-08	9:00

6:30

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ____ TEL ____ FAX ____

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

806/838 2 of 4

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test

PROJECT NUMBER 27011-07-3200

RECORDER ______ (SIGN)

SAMPLERS ______ (PRINT) ______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250 mL glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Laboratories Inc.

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	Field Filtered (check)	Poly-CN-NaOH	POC	H_3PO_4 Acid - TOC	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/9	9:00	SCRWA-D 2514H				C	G					X			3	14day					
2	6/9	10:00	SJ/SC-D 2514D				C	G					X			3	↓					
3	6/10	11:00	SJ/SC-C 2514C				C	G					X			↓						
4	6/11	13:00	SCRWA-C 2514G				C	G					X									
5	6/12	9:00	DI-C 2514K				C	G					X									
6	6/9	9:00	SCRWA-D 2514H				F	G						X			28day					
7	6/10	10:00	SJ/SC-D 2514D				F	G						X			↓					
8	6/10	11:00	SJ/SC-C 2514C				F	G						X								
9	6/11	13:00	SCRWA-C 2514G				F	G						X								
10	6/12	8:00	DI-C 2514K				F	G						X								
11	6/9	9:00	SCRWA-D 2514H												X		28day					
12	6/10	10:00	SJ/SC-D 2514D												X		↓					
13	6/10	11:00	SJ/SC-C 2514C												X							
14	6/11	13:00	SCRWA-C 2514G												X							
15	6/12	8:00	DI-C 2514K												X							
16	6/13	15:00	SCRWA-B 2514F												X							

NOTES / MISCELLANEOUS

Project # 27011-07-3200 (Locus)

Sampled by: Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On-Trac Courier	Ice Chest		Susan Steward	6/17/08			6-18-08	9:00

63

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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REV. 6/02

8061838 3 of 4

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER: 27011-07-3200
RECORDER ______ (SIGN)
SAMPLERS ______ (PRINT)
______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
(F.) Other 250mL plastic

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB: Weck Laboratories Inc.

LABORATORY USE ONLY
LAB PROJECT NO. ______

200.7

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO3	HCL	Field Filtered (check)	Poly metals-HNO3	Poly Alkalinity	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/9	8:00	DI-C 2514F				F	G					X		3	180day					
2	6/9	10:00	SJ/SC-D 2514D				F	G					X								
3	6/9	9:00	SCRWA-D 2514H				F	G					X								
4	6/10	10:00	SJ/SC-C 2514C				F	G					X								
5	6/11	12:00	SCRWA-C 2514G				F	G					X								
6	6/13	15:00	SCRWA-B 2514F				F	G					X								
7	6/9	9:00	SCRWA-D 2514H				C	G						X		14day					
8	6/10	11:00	SJ/SC-C 2514C				C	G						X							
9	6/10	10:00	SJ/SC-D 2514D				C	G						X							
10	6/11	12:00	SCRWA-C 2514G				C	G						X							
11	6/12	8:00	DI-C 2514K				C	G						X							
12	6/13	12:20	SCRWA-B 2514F				C	G						X							
13																					
14																					
15																					
16																					

NOTES / MISCELLANEOUS
Project #27011-07-3200 (Locus)
Sampled by: Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On-Trac Courier	Ice chest		Susan Steward	6/17/08			6-18-08	9:00

6.3

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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REV. 6/02

8061838

4 of 4

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test
SAMPLERS Miguel Reynoso (PRINT)
(SIGN)
PROJECT NUMBER 27011-07-3200
RECORDER ______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- A. 40-ml VOA Vial
- B. Glass Liter
- C. Plastic 500-ml
- D. Plastic Liter
- E. Brass Tube
- [✓ F.] Other 250mL containers

SAMPLE DESCRIPTION CODES
- A. Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- [✓ G.] Waste
- H. Blank/Spike
- I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Laboratories Inc.

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO$_3$	HCL		Field Filtered (check)	Poly Perchlorate	Poly 300 anions							TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/9	9:00	SCRWA-D 2514H				F	G						X								3	28 day					
2	6/9	10:00	SJ/SC-D 2514D				F	G						X														
3	6/10	10:00	SJ/SC-C 2514C				F	G						X														
4	6/11	13:00	SCRWA-C 2514G				F	G						X														
5	6/12	8:00	DI-C 2514K				F	G						X									↓					
6	6/9	9:00	SCRWA-D 2514H				F	G							X								28 day					
7	6/9	10:00	SJ/SC-D 2514D				F	G							X													
8	6/10	10:00	SJ/SC-C 2514C				F	G							X													
9	6/11	12:00	SCRWA C 2514G				F	G							X													
10	6/12	8:00	DI-C 2514K				F	G							X													
11	6/13	15:00	SCRWA-B 2514F				F	G							X								↓					
12																												
13																												
14																												
15																												
16																						↓						

NOTES / MISCELLANEOUS
project # 27011-07-3200 (Locus)
sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On-Trac Courier	icechest		Susan Stewart	6/17/08			6-18-08	9:00

6.3

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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REV. 6/02

VECTOR
ENGINEERING, INC.

DATE: August 6, 2008

TO: J. Wesley Hawthorne
Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043

JOB NO: 081707.00
LAB LOG: 2514.1

RECEIVED
AUG 1 8 2008
BY:

SS e-mail: wongn@locustec.com

RE: **Lab Report: Soil Column tests-Job #27011 PO 30-12337**

Enclosed are results for: Samples Received - April 25, 2008

Code	Item	Quantity
	Report includes results for:	
	Effluent Monitoring and Collection	6
19526	Sieve Analysis, ASTM D-422 w/ Hydrometer	11
18572	Hydraulic Conductivity-Flex-wall, ASTM D-5084	10
23524	Additional Monitoring	6
	Tests performed by Cranmer Analytical Lab (24 reports)	90
	Photographs of original 11 samples removed from tubes	

Note: Sample SJ/SC-C was composed of 58.8% rock (+3/8"); there was not enough fine material to perform the hydraulic conductivity or hydrometer tests. Five remaining samples have provided inadequate effluent flow for testing.

Thank you for consulting Vector Engineering for your material testing requirements. We look forward to working with you again. If you have any questions or require any additional information, please call us at 1-530-272-2448.

Sincerely,

Prepared By: Kenneth R. Criley
Technical Director

M Dell-Era
Reviewed By: Margaret Dell-Era
Laboratory Administrator

This testing is based up on accepted industry practice as well as the test method listed. These results apply only to the samples supplied and tested for the above referenced job. The data and information are proprietary and can not be released without authorization of Vector Engineering Inc. By accepting the data and results represented on this page, client agrees to limit the liability of Vector Engineering, Inc. from Client and all other parties claims arising out of the use of this data to the cost for the respective test(s) represented here, and Client agrees to indemnify and hold harmless Vector from and against all liability in excess of the aforementioned limit.

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JUN 1 [illegible] 2008

Bacterial Report

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 1082351
Date Reported: 06/17/08
Date / Time Received: 06/12/08 16:56

Site Description: SCRWA - C 2614-G
Collected By: Easton
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082351-1
Date Collected: 06/12/08 15:27
Set Up Time: 06/12/08 17:04
Elapsed Time: 1.6 Hours
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	<2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Site Description: SCRWA W/ Gypsum
SCRWA-D 2514-H
Collected By: Easton
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082351-2
Date Collected: 06/12/08 15:30
Set Up Time: 06/12/08 17:04
Elapsed Time: 1.6 Hours
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	7	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Site Description: DI-C 2514-K
Collected By: Easton
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082351-3
Date Collected: 06/12/08 15:20
Set Up Time: 06/12/08 17:04
Elapsed Time: 1.7 Hours
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	<2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Client Name: Vector Engineering **Date Reported:**06/17/08 **Job Number:** 1082351

Site Description: SJ/SC W/Gypsum SJ/SC - D 2514-D
Sample Number: 1082351-4
Date Collected: 06/12/08 15:15
Collected By: Easton
Set Up Time: 06/12/08 17:04
Source Type: Effluent
Elapsed Time: 1.8 Hours
Chlorine Residual: Could not determine
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	<2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Site Description: SJ/SC - C 2514-C
Sample Number: 1082351-5
Date Collected: 06/12/08 15:05
Collected By: Easton
Set Up Time: 06/12/08 17:04
Source Type: Effluent
Elapsed Time: 2.0 Hours
Chlorine Residual: Could not determine
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	8	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Ralph G. McKnight

Ralph G. McKnight

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Bacterial Report

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 1082355
Date Reported: 06/16/08
Date / Time Received: 06/13/08 13:18

Site Description: SJ/SC (2154C)
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082355-1
Date Collected: 06/13/08 11:20
Set Up Time: 06/13/08 13:24
Elapsed Time: 2.1 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	4.1	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: DI-C 2514 - V
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082355-2
Date Collected: 06/13/08 11:20
Set Up Time: 06/13/08 13:24
Elapsed Time: 2.1 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	238.2	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: SCRWA-C 2514-G
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082355-3
Date Collected: 06/13/08 11:21
Set Up Time: 06/13/08 13:24
Elapsed Time: 2.1 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	4.1	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Client Name: Vector Engineering **Date Reported:**06/16/08 **Job Number:** 1082355

Site Description: SCRWA-D 2514-H
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082355-4
Date Collected: 06/13/08 11:20
Set Up Time: 06/13/08 13:24
Elapsed Time: 2.1 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	18.9	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: SJ/SC-D 2514-D
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082355-5
Date Collected: 06/13/08 11:30
Set Up Time: 06/13/08 13:24
Elapsed Time: 1.9 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	105.8	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Ralph G. McKnight
Ralph G. McKnight

JUL 01 2008

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Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 1082476
Date Reported: 06/30/08
Date / Time Received: 06/24/08 14:16

Site Description: SJ/SC-D 2514D
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082476-1
Date Collected: 06/24/08 10:00
Set Up Time: 06/24/08 14:25
Elapsed Time: 4.4 Hours
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	21	SM(18) 9221	MPN per 100mL
Fecal Coliform	4	SM(18) 9221	MPN per 100mL

Site Description: SCRWA-D 2514H
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082476-2
Date Collected: 06/24/08 10:00
Set Up Time: 06/24/08 14:26
Elapsed Time: 4.4 Hours
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Site Description: SCRWA-B 2514F
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082476-3
Date Collected: 06/24/08 10:00
Set Up Time: 06/24/08 14:26
Elapsed Time: 4.4 Hours
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	<2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Client Name: Vector Engineering **Date Reported:**06/30/08 **Job Number:** 1082476

Site Description: SCRWA-C 2514G
Sample Number: 1082476-4
Date Collected: 06/24/08 10:00
Collected By: Vector
Set Up Time: 06/24/08 14:26
Source Type: Effluent
Elapsed Time: 4.4 Hours
Chlorine Residual: Could not determine
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	<2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Site Description: SJ/SC-C 2514C
Sample Number: 1082476-5
Date Collected: 06/24/08 10:00
Collected By: Vector
Set Up Time: 06/24/08 14:26
Source Type: Effluent
Elapsed Time: 4.4 Hours
Chlorine Residual: Could not determine
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	80	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Site Description: DI-C 2514K
Sample Number: 1082476-6
Date Collected: 06/24/08 10:00
Collected By: Vector
Set Up Time: 06/24/08 14:26
Source Type: Effluent
Elapsed Time: 4.4 Hours
Chlorine Residual: Could not determine
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	4	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Ken Neely

Cranmer
Analytical
Laboratory

Bacterial Report

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Vector Engineering
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Grass Valley CA 95945

Job Number: 1082477
Date Reported: 06/26/08
Date / Time Received: 06/24/08 14:27

Site Description: SCRWA-B 2514F
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082477-1
Date Collected: 06/24/08 10:00
Set Up Time: 06/24/08 14:34
Elapsed Time: 4.6 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	Absent	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: SCRWA-D 2514-H
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082477-2
Date Collected: 06/24/08 10:00
Set Up Time: 06/24/08 14:34
Elapsed Time: 4.6 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	Absent	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: SCRWA-C 2514-G
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082477-3
Date Collected: 06/24/08 10:00
Set Up Time: 06/24/08 14:34
Elapsed Time: 4.6 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	Absent	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Client Name: Vector Engineering **Date Reported:**06/26/08 **Job Number:** 1082477

Site Description: SJ/SC-D 2514-D
Sample Number: 1082477-4
Date Collected: 06/24/08 10:00
Collected By: Vector
Set Up Time: 06/24/08 14:34
Source Type: Effluent
Elapsed Time: 4.6 Hours
Chlorine Residual: Could not determine
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	1,119.9	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: SJ/SC-C 2514C
Sample Number: 1082477-5
Date Collected: 06/24/08 10:00
Collected By: Vector
Set Up Time: 06/24/08 14:34
Source Type: Effluent
Elapsed Time: 4.6 Hours
Chlorine Residual: Could not determine
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	204.6	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: DI-C 2514K
Sample Number: 1082477-6
Date Collected: 06/24/08 10:00
Collected By: Vector
Set Up Time: 06/24/08 14:34
Source Type: Effluent
Elapsed Time: 4.6 Hours
Chlorine Residual: Could not determine
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	2,419.2	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

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Bacterial Report

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Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 1082508
Date Reported: 06/27/08
Date / Time Received: 06/25/08 13:06

Site Description: SCRWA-B 2514F
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082508-1
Date Collected: 06/25/08 11:30
Set Up Time: 06/25/08 13:56
Elapsed Time: 2.4 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	Absent	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: SCRWA-1 2514N
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082508-2
Date Collected: 06/25/08 11:30
Set Up Time: 06/25/08 13:56
Elapsed Time: 2.4 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	2.0	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: DI-1 2514P
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082508-3
Date Collected: 06/25/08 11:30
Set Up Time: 06/25/08 13:56
Elapsed Time: 2.4 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	Absent	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Ken Neely

Cranmer
Analytical
Laboratory

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Bacterial Report

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 1082509
Date Reported: 06/27/08
Date / Time Received: 06/25/08 13:07

Site Description: SCRWA-B 2514F
Sample Number: 1082509-1
Date Collected: 06/25/08 11:30
Collected By: Vector
Set Up Time: 06/25/08 13:59
Source Type: Effluent
Elapsed Time: 2.5 Hours
Chlorine Residual: Could not determine
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	<2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Site Description: DI-1 2514P
Sample Number: 1082509-2
Date Collected: 06/25/08 11:30
Collected By: Vector
Set Up Time: 06/25/08 13:59
Source Type: Effluent
Elapsed Time: 2.5 Hours
Chlorine Residual: Could not determine
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	<2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Site Description: SCRWA-1 2514N
Sample Number: 1082509-3
Date Collected: 06/25/08 11:30
Collected By: Vector
Set Up Time: 06/25/08 13:59
Source Type: Effluent
Elapsed Time: 2.5 Hours
Chlorine Residual: Could not determine
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	<2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Ken Neely

Cranmer
Analytical
Laboratory

AUG 0 5 2008

August 4, 2008

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Vector Engineering
143 E Spring Hill Dr
Grass Valley CA 95945

CASE NARRATIVE

Job Number: 1082582
Sample Site: SJ/SC-1 2514-L
Date Received: 06/30/08

To Whom It May Concern:

The sample referred to above was submitted to Cranmer Analytical Lab for Total and Fecal Coliform analyses. Due to an analyst error, the holding time for this analysis was exceeded. We have taken steps to ensure this problem does not happen in the future. It is not likely this event caused significant discrepancies in the reported values. If you have any questions regarding this project, please do not hesitate to call me. I apologize for any inconvenience this may cause.

Sincerely,

Ken Neely, Laboratory Director

JUL 1 0 2008

Cranmer
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Bacterial Report

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 1082582
Date Reported: 07/07/08
Date / Time Received: 06/30/08 13:59

Site Description: SJ/SC-1 2514-L
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082582-1
Date Collected: 06/30/08 8:30
Set Up Time: 06/30/08 14:41
Elapsed Time: 6.2 Hours
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	9	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

cc: Vector Engineering

Ken Neely

Cranmer
Analytical
Laboratory

AUG 0 5 2008

August 4, 2008

1188 E. Main Street / Grass Valley, CA 95945 / (530) 273-7284 / FAX (530) 273-9507 / ELAP Certification No. 1936

Vector Engineering
143 E Spring Hill Dr
Grass Valley CA 95945

CASE NARRATIVE

Job Number: 1082583
Sample Site: SJ/SC-1 2514-L
Date Received: 06/30/08

To Whom It May Concern:

The sample referred to above was submitted to Cranmer Analytical Lab for Total and Fecal Coliform analyses. Due to an analyst error, the holding time for this analysis was exceeded. We have taken steps to ensure this problem does not happen in the future. It is not likely this event caused significant discrepancies in the reported values. If you have any questions regarding this project, please do not hesitate to call me. I apologize for any inconvenience this may cause.

Sincerely,

Ken Neely, Laboratory Director

JUL 0 8 2008

Cranmer
Analytical
Laboratory

Bacterial Report

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Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 1082583
Date Reported: 07/02/08
Date / Time Received: 06/30/08 14:00

Site Description: SJ/SC-1 2514-L
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082583-1
Date Collected: 06/30/08 8:30
Set Up Time: 06/30/08 14:40
Elapsed Time: 6.2 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	325.5	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

cc: Vector Engineering

Ken Neely

JUL 1 0 2008

Cranmer
Analytical
Laboratory

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Bacterial Report

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 1082627
Date Reported: 07/03/08
Date / Time Received: 07/02/08 11:42

Site Description: DI-2 2514Q
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082627-1
Date Collected: 07/02/08 10:00
Set Up Time: 07/02/08 13:05
Elapsed Time: 3.1 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	Absent	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: SCRWA-2 2514O
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082627-2
Date Collected: 07/02/08 10:00
Set Up Time: 07/02/08 13:05
Elapsed Time: 3.1 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	4.1	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

Site Description: SJ/SC-2 2514M
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082627-3
Date Collected: 07/02/08 10:00
Set Up Time: 07/02/08 13:05
Elapsed Time: 3.1 Hours
Analysis: QT High Range (24 hr)
Media: MMO-MUG 24hr

	Result	Method	Units
Total Coliform	410.6	SM(18) 9223	MPN per 100mL
E. coli	Absent	SM(18) 9223	MPN per 100mL

---

cc: Vector Engineering

Ken Neely

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JUL 10 2008

Bacterial Report

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 1082628
Date Reported: 07/07/08
Date / Time Received: 07/02/08 11:43

Site Description: DI-2 2514Q
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082628-1
Date Collected: 07/02/08 10:00
Set Up Time: 07/02/08 13:08
Elapsed Time: 3.1 Hours
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	<2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Site Description: SCRWA-2 2514O
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082628-2
Date Collected: 07/02/08 10:00
Set Up Time: 07/02/08 13:08
Elapsed Time: 3.1 Hours
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	<2	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

Site Description: SJ/SC-2 2514M
Collected By: Vector
Source Type: Effluent
Chlorine Residual: Could not determine

Sample Number: 1082628-3
Date Collected: 07/02/08 10:00
Set Up Time: 07/02/08 13:08
Elapsed Time: 3.1 Hours
Analysis: Dil. 5x3 TC/ FC
Media: LTB/BGB/EC

	Result	Method	Units
Total Coliform	4	SM(18) 9221	MPN per 100mL
Fecal Coliform	<2	SM(18) 9221	MPN per 100mL

---

cc: Vector Engineering

Ken Neely

AUG 0 5 2008

Cranmer
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Notice of Amended Report

Report Type: Chemical
Job Number: 6081319
Date Amended: 08/04/08
Date Reported: 07/09/08
Date / Time Received: 06/13/08 14:41

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

We have found it necessary to amend the report referred to above. Enclosed is a copy of the corrected version. We regret any incovenience this change may cause. Details as to why this change was necessary are as follows:

Amended to include case narrative.

Changes Approved By:

Cranmer
Analytical
Laboratory

August 4, 2008

1188 E. Main Street / Grass Valley, CA 95945 / (530) 273-7284 / FAX (530) 273-9507 / ELAP Certification No. 1936

Vector Engineering
143 E Spring Hill Dr
Grass Valley CA 95945

CASE NARRATIVE

Job Number: 6081319
Sample Site: Recycled water bench test
Date Received: 06/13/08 14:41

To Whom It May Concern:

The sample referred to above was submitted to Cranmer Analytical Lab for Total Dissolved Solids analysis. Due to an analyst error, the holding time for this test was exceeded. We have corrected the problem. I apologize for any inconvenience this may cause. Please do not hesitate to call me with any questions you may have regarding this project.

Sincerely,

Ken Neely, Laboratory Director

Cranmer
Analytical
Laboratory

Chemical Report

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 6081319
Date Reported: 08/04/08
Date / Time Received: 06/13/08 14:41
System Number:

Sample Number: 6081319 - 1

Sample Site: SJ/SC-C 2514C
Date / Time Collected: 06/12/08 0:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	705	mg/L	EPA 160.1	06/20/2008	10

Sample Number: 6081319 - 2

Sample Site: DI-C 2514k
Date / Time Collected: 06/12/08 8:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	964	mg/L	EPA 160.1	06/20/2008	10

Sample Number: 6081319 - 3

Sample Site: SJ/SC D 2514D
Date / Time Collected: 06/10/08 0:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	723	mg/L	EPA 160.1	06/20/2008	10

Sample Number: 6081319 - 4

Sample Site: SCWAD 2514H
Date / Time Collected: 06/09/08 0:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	768	mg/L	EPA 160.1	06/20/2008	10

cc: Vector Engineering

Client Name: Vector Engineering **Date Reported:** 08/04/08 **Job Number:** 6081319

Sample Number: 6081319 - 5

Sample Site: SCRWA-C 2514-G
Date / Time Collected: 06/11/08 13:00 **Sample Collected By:** Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	699	mg/L	EPA 160.1	06/20/2008	10

cc: Vector Engineering

Ken Neely

6081319

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test

PROJECT NUMBER: 27011-07-3200

RECORDER: ______ (SIGN)

SAMPLERS: Susan Stewart (PRINT)

Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500 ml
D. Plastic Liter
E. Brass Tube
F. Other 125 ml poly

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
[✓ G. Waste]
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB: CRANMER

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample description (enter code)	Number of containers and preservation: Unpreserved	HNO₃	HCL	Field Filtered (check)	Analysis requested: Total Coliform	Fecal Coliform	E Coli	TDS	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/12	1600	SCRWAC 2514G				F	G					X	X									
2			SCRWAD 2514H				|	|					X	X									
3			DI-C 2514K				|	|					X	X									
4			SJ/SC-C 2514C				|	|					X	X									
5	↓	↓	SJ/SC-D 2514D				|	|					X	X									
6	6/13	1200	SCRWAC 2514G												X								
7			SCRWA-D 2514H												X								
8			DI-C 2514K												X								
9			SJ/SC-D 2514D												X								
10			SJ/SC-C 2514C												X								
11			SCRWA-C 2514G				C	|								X							
12			SCRWA-D H				C	|								X							
13			DI-C K				C	|								X							
14			SJ/SC-D B				C	|								X							
15			SJ/SC-C ↓ C				C	↓								X							
16	↓	↓																					

NOTES / MISCELLANEOUS

Sampled by Vector Engineering
project # 27011-07-3200 (Locus)

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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Cranmer
Analytical
Laboratory

Chemical Report

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Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 6081332
Date Reported: 07/09/08
Date / Time Received: 06/16/08 15:40
System Number:

Sample Number: 6081332 - 1

Sample Site: SJ/SC-C 2514 C
Date / Time Collected: 06/16/08 10:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.12	mg/L	EPA 425.1	06/18/2008	0.05

Sample Number: 6081332 - 2

Sample Site: DI-C 2514-K
Date / Time Collected: 06/16/08 10:45
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	ND	mg/L	EPA 425.1	06/18/2008	0.05

Sample Number: 6081332 - 3

Sample Site: SCRWA-D 2514-H
Date / Time Collected: 06/16/08 10:45
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.08	mg/L	EPA 425.1	06/18/2008	0.05

Sample Number: 6081332 - 4

Sample Site: SCRWA-C 2514-G
Date / Time Collected: 06/16/08 10:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.08	mg/L	EPA 425.1	06/18/2008	0.05

Note: "ND" means "none detected" (ie, none was found in the sample at or above the reporting limit).

cc: Vector Engineering

Client Name: Vector Engineering **Date Reported:** 07/09/08 **Job Number:** 6081332

Sample Number: 6081332 - 5

Sample Site: SJ/SC-D 2514 D
Date / Time Collected: 06/13/08 16:38 **Sample Collected By:** Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	625	mg/L	EPA 160.1	06/20/2008	10

SAMPLE ID
IS ACTUALLY
SCRWA-B.2514F
not
SS/SC-D 2514D

cc: Vector Engineering

W081332

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER: 27011-07-3200
RECORDER ______ (SIGN)
SAMPLERS: Vector Eng (PRINT)
______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 125 ml

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB: CRANMER LAB

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO₃	HCL	Field Filtered (check)	ANALYSIS REQUESTED: HTP	Surfactant	TDS	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/16	1400	SCRWAC 2514 G				F	G					X									
2			SCRWA D H				F	G					X									
3			DI-C K				F	G					X									
4			SCRWA-B F				F	G					X									
5			SJ/SC-C C				F	G					X									
6			SJ/SC-C C				D	G						X								
7			DI-C K				D	G						X								
8			SCRWA-D H				D	G						X								
9			SCRWA-C C				D	G						X								
10			SCRWA B 2514 F				F	G							X							
11			SJ/SC-D 2514 D				F	G					X									
12																						
13																						
14																						
15																						
16																						

NOTES / MISCELLANEOUS

Sampled by Vector Engineering
Locus project # 27011-07-3200

Field / Container Temp. ______

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV 6/02

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Chemical Report

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 6081350
Date Reported: 07/30/08
Date / Time Received: 06/17/08 15:36
System Number:

Sample Number: 6081350 - 1

Sample Site: SJ/SC-C 2514-C
Date / Time Collected: 06/17/08 11:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	701	mg/L	EPA 160.1	06/20/2008	10

Sample Number: 6081350 - 2

Sample Site: SCRWA-C 2514-G
Date / Time Collected: 06/17/08 11:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	691	mg/L	EPA 160.1	06/20/2008	10

Sample Number: 6081350 - 3

Sample Site: SCRWA-D 2514-H
Date / Time Collected: 06/17/08 11:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	585	mg/L	EPA 160.1	06/20/2008	10

Sample Number: 6081350 - 4

Sample Site: DI-C 2514-K
Date / Time Collected: 06/17/08 11:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	1,360	mg/L	EPA 160.1	06/20/2008	10

cc: Vector Engineering

Client Name: Vector Engineering **Date Reported:** 07/30/08 **Job Number:** 6081350

Sample Number: 6081350 - 5

Sample Site: SCRWA-B 2514-F
Date / Time Collected: 06/17/08 11:30 **Sample Collected By:** Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	593	mg/L	EPA 160.1	06/20/2008	10

Sample Number: 6081350 - 6

Sample Site: SJ/SC-D 2514-D
Date / Time Collected: 06/16/08 14:30 **Sample Collected By:** Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.10	mg/L	EPA 425.1	06/18/2008	0.05

cc: Vector Engineering

Ken Neely

6081350

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test

PROJECT NUMBER 27011-07-3200

RECORDER ____________ (SIGN)

SAMPLERS Vector (PRINT)

Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
A. 40-ml VOA Vial B. Glass Liter C. Plastic 500-ml D. Plastic Liter E. Brass Tube F. Other 125 ml poly	A. Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment F. Oil G. Waste H. Blank/Spike I. Other ______	1. Standard 2. 48 Hour 3. 24 Hour 4. Other deliv

ANALYTICAL LAB Cranmer

LABORATORY USE ONLY

LAB PROJECT NO. ____________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL		Field Filtered (check)	HTP	TDS	Surfactants							TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Stored at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/17	12 00	SCRWA-D 2514 H				F	G						X									4	6hr					
2			SJ/SC-C 2514-C				F							X															
3			SCRWA-C 2514 G				F							X															
4			DT-C 2514 K				F							X										↓					
5			SJ/SC-C 2514-C				C								X									7day					
6			SCRWA-C 2514-G				C								X														
7			SCRWA-D 2514 H				C								X														
8			DT-C 2514 K				C								X														
9			SCRWA-B 2514F				C								X														
10	↓	↓	SJ/SC-D 2514D				D	↓								X							↓	2day					
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 12°C

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Icechest							

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ____________ TEL ________ FAX ________

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Cranmer
Analytical
Laboratory

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JUL 11 2008

Chemical Report

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 6081380
Date Reported: 07/09/08
Date / Time Received: 06/19/08 14:54
System Number:

Sample Number: 6081380 - 1

Sample Site: SJ/SC-C 2514C
Date / Time Collected: 06/19/08 11:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.10	mg/L	EPA 425.1	06/20/2008	0.05

Sample Number: 6081380 - 2

Sample Site: SCRWA-D 2514H
Date / Time Collected: 06/19/08 12:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.07	mg/L	EPA 425.1	06/20/2008	0.05

Sample Number: 6081380 - 3

Sample Site: SCRWA-C 2514G
Date / Time Collected: 06/19/08 10:50
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.07	mg/L	EPA 425.1	06/20/2008	0.05

Sample Number: 6081380 - 4

Sample Site: SCRWA-B 2514F
Date / Time Collected: 06/19/08 12:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.06	mg/L	EPA 425.1	06/20/2008	0.05

Note: "ND" means "none detected" (ie, none was found in the sample at or above the reporting limit).

cc: Vector Engineering

Client Name: Vector Engineering **Date Reported:** 07/09/08 **Job Number:** 6081380

Sample Number: 6081380 - 5

Sample Site: SJ/SC-D 2514~~K~~ D

Date / Time Collected: 06/19/08 12:00 **Sample Collected By:** Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.09	mg/L	EPA 425.1	06/20/2008	0.05

Sample Number: 6081380 - 6

Sample Site: DI-C 2514K

Date / Time Collected: 06/19/08 10:50 **Sample Collected By:** Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	ND	mg/L	EPA 425.1	06/20/2008	0.05

Sample Number: 6081380 - 7

Sample Site: SJ/SC-D 2514D

Date / Time Collected: 06/19/08 14:30 **Sample Collected By:** Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	700	mg/L	EPA 160.1	06/20/2008	10

Note: "ND" means "none detected" (ie, none was found in the sample at or above the reporting limit).

cc: Vector Engineering

Ken Neely

AUG 0 5 2008

Cranmer
Analytical
Laboratory

Notice of Amended Report

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Report Type: Chemical
Job Number: 6081432
Date Amended: 08/04/08
Date Reported: 07/24/08
Date / Time Received: 06/25/08 13:14

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

We have found it necessary to amend the report referred to above. Enclosed is a copy of the corrected version. We regret any incovenience this change may cause. Details as to why this change was necessary are as follows:

Amended to include case narrative.

Changes Approved By:

Cranmer
Analytical
Laboratory

August 4, 2008

1188 E. Main Street / Grass Valley, CA 95945 / (530) 273-7284 / FAX (530) 273-9507 / ELAP Certification No. 1936

Vector Engineering
143 E Spring Hill Dr
Grass Valley CA 95945

CASE NARRATIVE

Job Number: 6081432
Sample Site: SCRWA-1 2514N
Date Received: 06/25/08

To Whom It May Concern:

The sample referred to above was submitted to Cranmer Analytical Lab for Total Dissolved Solids analyses. Due to an analyst error, the holding time for this analysis was exceeded. We have taken steps to ensure this problem does not happen in the future. It is not likely this event caused significant discrepancies in the reported values. If you have any questions regarding this project, please do not hesitate to call me. I apologize for any inconvenience this may cause.

Sincerely,

Ken Neely, Laboratory Director

Cranmer
Analytical
Laboratory

Chemical Report

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 6081432
Date Reported: 08/04/08
Date / Time Received: 06/25/08 13:14
System Number:

Sample Number: 6081432 - 1

Sample Site: SCRWA-1 2514N
Date / Time Collected: 06/24/08 16:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.06	mg/L	EPA 425.1	06/25/2008	0.05
Total Dissolved Solids	714	mg/L	EPA 160.1	07/04/2008	10

Sample Number: 6081432 - 2

Sample Site: DI-1 2514P
Date / Time Collected: 06/24/08 17:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	ND	mg/L	EPA 425.1	06/25/2008	0.05
Total Dissolved Solids	ND	mg/L	EPA 160.1	07/04/2008	10

Note: "ND" means "none detected" (ie, none was found in the sample at or above the reporting limit).

cc: Vector Engineering

Ken Neely

6081432

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ____________ (SIGN)

SAMPLERS Vector (PRINT)
S. Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 125 ml plastic

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ________

ANALYTICAL LAB CRANMER

LABORATORY USE ONLY
LAB PROJECT NO. ________

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED												LABORATORY USE ONLY		
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL		Field Filtered (check)	Surfactants	TDS	Total Coli	Fecal Coli	E Coli				TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/24	16:30	SCRWA 1 2514N				D	G	X				X	X								1	2day					
2	6/24	17:00	DI-1 2514P				D	G	X				X	X									2day					
3	6/24	16:00	SCRWA-1 2514N				C	G	X						X								7day					
4	6/24	17:00	DI-1 2514P				C	G	X						X								7day					
5	6/25	11:30	SCRWA-1 2514N				F	↓	↓				↓			X	X						6hr					
6	↓	↓	DI-1 2514P				↓	↓	↓				↓			X	X						↓					
7			SCRWA-1 2514N				↓	↓	↓				↓					X					↓					
8	↓	↓	DI-1 2514P				↓	↓	↓				↓					X					↓					
9			SCRWA-B 2514F				↓	↓	↓				↓			X	X						↓					
10	↓	↓	SCRWA-B 2514F				↓	↓	↓				↓					X					↓					
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature) Susan Stewart	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Ice Chest		Susan Stewart	6/25/05	12:50			

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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REV. 8/02

JUL 0 2 2008

Cranmer
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Chemical Report

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Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 6081458
Date Reported: 06/30/08
Date / Time Received: 06/26/08 14:08
System Number:

Sample Number: 6081458 - 1

Sample Site: SCRWA-B 2514F
Date / Time Collected: 06/25/08 16:15
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	ND	mg/L	EPA 425.1	06/26/2008	0.05

Note: "ND" means "none detected" (ie, none was found in the sample at or above the reporting limit).

Ken Neely

Cranmer
Analytical
Laboratory

JUL 30 2008

July 29, 2008

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Vector Engineering
143 E Spring Hill Dr
Grass Valley CA 95945

CASE NARRATIVE

Job Number: 6081481
Sample Site: SJ/SC 2514L
Date Received: 06/30/08 14:12

To Whom It May Concern:

The sample referred to above was submitted to Cranmer Analytical Lab for Total Dissolved Solids analysis three days after collection. Due to the delay in sample submission, and an analyst error, the holding time for this test was exceeded. We have corrected the problem, and ask that samples be submitted as soon as possible after collection to alleviate this issue in the future. I apologize for any inconvenience this may cause. Please do not hesitate to call me with any questions you may have regarding this project.

Sincerely,

Ken Neely, Laboratory Director

Cranmer
Analytical
Laboratory

Chemical Report

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 6081481
Date Reported: 07/29/08
Date / Time Received: 06/30/08 14:12
System Number:

Sample Number: 6081481 - 1

Sample Site: SJ/SC 2514L
Date / Time Collected: 06/27/08 10:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	652	mg/L	EPA 160.1	07/07/2008	10

Sample Number: 6081481 - 2

Sample Site: SJ/SC 2514L
Date / Time Collected: 06/30/08 8:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	0.11	mg/L	EPA 425.1	07/01/2008	0.05

cc: Vector Engineering

Ken Neely

608481

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
SAMPLERS: Vector (PRINT)
Susan Stewart (SIGN)
PROJECT NUMBER: 27011-07-3200
RECORDER: ________ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ________

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ________

ANALYTICAL LAB: Cranmer

LABORATORY USE ONLY
LAB PROJECT NO. ________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL		Field Filtered (check)	Poly TDS	HPC	Total Fecal	Surfactants	E. coli	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/27	10:30	CJ/JC 2514L				C	G	X					X					1	7d					
2	6/30	9:30	↓												X				1	6hr					
3	6/30															X			1	6hr					
4	6/30																X		1	2d					
5	6/30		↓															X	1	6hr					
6	6/30		SCRWA-1 2514N												X				1	6hr					
7	6/30	↓	SCRWR-B 2514E												X					6hr					
8	6/30	↓	DI-1 2514P												X					6hr					
9																									
10																									
11																									
12																									
13																									
14																									
15																									
16																									

NOTES / MISCELLANEOUS

Sampled by Vector Eng.

Field / Container Temp. ________

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time	
Relinquished By: (Signature)	Received By: (Signature)	Date	Time	
Relinquished By: (Signature)	Received By: (Signature)	Date 110	Time	

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Carrier	Ice chest		Susan Stewart	06/30/08			4.5°	1353

Send Lab Results to (Name): Norman Wong (Check Office Below)
Verbals Requested: Yes ☐ No ☐

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☐ OTHER ________ TEL ________ FAX ________

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JUL 30 2008

Chemical Report

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 6081493
Date Reported: 07/29/08
Date / Time Received: 07/01/08 15:40
System Number:

Sample Number: 6081493 - 1

Sample Site: DI-2 2514Q
Date / Time Collected: 07/01/08 11:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	ND	mg/L	EPA 160.1	07/07/2008	10

Sample Number: 6081493 - 2

Sample Site: SJ/SC-2 2514M
Date / Time Collected: 07/01/08 10:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	649	mg/L	EPA 160.1	07/07/2008	10

Sample Number: 6081493 - 3

Sample Site: SCRWA-2 2514O
Date / Time Collected: 07/01/08 10:30
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
Total Dissolved Solids	725	mg/L	EPA 160.1	07/07/2008	10

Note: "ND" means "none detected" (ie, none was found in the sample at or above the reporting limit).

cc: Vector Engineering

Ken Neely

6081493

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
SAMPLERS: Vector (PRINT)
_______________ (SIGN)
PROJECT NUMBER: 2701-07-3200
RECORDER _______________ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other _______

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other _______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other _______

ANALYTICAL LAB: Cranmer Lab

LABORATORY USE ONLY
LAB PROJECT NO. _______________

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO3	HCL	Field Filtered (check)	ANALYSIS REQUESTED: TDS	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
-1	1	7/1	11:00	DI-2 2514 Q				C	G	x				X	1	7day					
-2	2	7/1	10:00	SJ/SC-2 2514M				C	G	x				X	1	↓					
-3	3	7/1	10:30	SCRWA-2 2514C				C	G	x				X	1	↓					
	4																				
	5																				
	6																				
	7																				
	8																				
	9																				
	10																				
	11																				
	12																				
	13																				
	14																				
	15																				
	16																				

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature) Susan Stewart	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Icechest		Susan Stewart	7/1/08		12°	7/1	1524

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER _______________ TEL _______ FAX _______

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REV. 6/02

Cranmer
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JUL 10 2008

Chemical Report

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: 6081501
Date Reported: 07/07/08
Date / Time Received: 07/02/08 14:02
System Number:

Sample Number: 6081501 - 1

Sample Site: SJ/SC-2 2514M
Date / Time Collected: 07/02/08 10:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	ND	mg/L	EPA 425.1	07/03/2008	0.05

Sample Number: 6081501 - 2

Sample Site: SCRWA-2 2514O
Date / Time Collected: 07/02/08 10:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	ND	mg/L	EPA 425.1	07/03/2008	0.05

Sample Number: 6081501 - 3

Sample Site: DI-2 2514Q
Date / Time Collected: 07/02/08 10:00
Sample Collected By: Vector

Parameter	Analysis Result	Reporting Units	Analytical Method	Date of Analysis	Reporting Limit
MBAS (surfactants)	ND	mg/L	EPA 425.1	07/03/2008	0.05

Note: "ND" means "none detected" (ie, none was found in the sample at or above the reporting limit).

cc: Vector Engineering

Ken Neely

6081501

page 1 of 1

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test

PROJECT NUMBER: 27011-07-3200

RECORDER: ______ (SIGN)

SAMPLERS: Vector (PRINT)

______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other [illegible]

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinsate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB: Cranmer Lab

LABORATORY USE ONLY

LAB PROJECT NO. ______

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO3	HCL		Field Filtered (check)	ANALYSIS REQUESTED: HPC	Total/Fecal Coliform	E. coli	Surfactants						TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
-1	1	7/2	10:00	WTC-2 2514 M				F	G	X					X									1	6 hr					
	2							F	G	X						X								1	6 hr					
	3							F	G	X							X							1	6 hr					
	4							D	G	X								X						1	2d					
-2	5			S-RWA-2 2514 O				F	G	X					X									1	6 hr					
	6							F	G	X						X								1	6 hr					
	7							F	G	X							X							1	6 hr					
	8							D	G	X								X						1	2d					
-3	9			DI-2 2514 Q				F	G	X					X									1	6 hr					
	10							F	G	X						X								1	6 hr					
	11							F	G	X							X							1	6 hr					
	12							D	G	X								X							2d					
	13																													
	14																													
	15																													
	16																													

NOTES / MISCELLANEOUS

Sampled by Vector Eng.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Ice Chest		Susan Stewart	7/2/08			7/2	1140

Send Lab Results to (Name): Norman Wong (Check Office Below)

Verbals Requested: Yes ☐ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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REV. 6/02

JUN 24 2008

Cranmer
Analytical
Laboratory

Heterotrophic Plate Count

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: B1082371
Date Reported: 06/23/08
Date / Time Received: 06/16/08 15:39

Sampling Point: SJ/SC-D w/ gypsum 2514-D
Date Collected: 6/16/2008
Sampled By: Vector
Incubation Time (hours): 43.4 hours

Lab Number: 1082371-6
Method Used: Pour Plate Method (SM 18th Ed., 9215 B)
Medium Used: Tryptone Glucose Yeast Agar
Incubation Temperature: 35 °C

The sample contained **Too High** colony-forming units per milliliter (CFU/mL)

Quality Control		
Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

Sampling Point: Vector SCRWA-C/2514 G
Date Collected: 6/16/2008
Sampled By: Vector
Incubation Time (hours): 43.4 hours

Lab Number: 1082371-5
Method Used: Pour Plate Method (SM 18th Ed., 9215 B)
Medium Used: Tryptone Glucose Yeast Agar
Incubation Temperature: 35 °C

The sample contained **Too High** colony-forming units per milliliter (CFU/mL)

Quality Control		
Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

Sampling Point: Vector SJ/SC-C 2514 C
Lab Number: 1082371-4
Date Collected: 6/16/2008
Method Used: Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By: Vector
Medium Used: Tryptone Glucose Yeast Agar
Incubation Time (hours): 43.4 hours
Incubation Temperature: 35 °C

The sample contained **Too High** colony-forming units per milliliter (CFU/mL)

Quality Control		
Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

Sampling Point: Vector DI-C 2514-K
Lab Number: 1082371-3
Date Collected: 6/16/2008
Method Used: Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By: Vector
Medium Used: Tryptone Glucose Yeast Agar
Incubation Time (hours): 43.4 hours
Incubation Temperature: 35 °C

The sample contained **Too High** colony-forming units per milliliter (CFU/mL)

Quality Control		
Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

Sampling Point: Vector SCRWA-D w/ gypsum/2514 H
Lab Number: 1082371-2
Date Collected: 6/16/2008
Method Used: Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By: Vector
Medium Used: Tryptone Glucose Yeast Agar
Incubation Time (hours): 43.4 hours
Incubation Temperature: 35 °C

The sample contained **Too High** colony-forming units per milliliter (CFU/mL)

Quality Control		
Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

Job Number: 1082371 **Date Reported:** 06/23/08 **Client Name:** Vector Engineering

Sampling Point:	Vector SCRWA-B/2514 F	**Lab Number:**	1082371-1
Date Collected:	6/16/2008	**Method Used:**	Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By:	Vector	**Medium Used:**	Tryptone Glucose Yeast Agar
Incubation Time (hours):	43.4 hours	**Incubation Temperature:**	35 °C

The sample contained **Too High** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

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Cranmer
Analytical
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Heterotrophic Plate Count

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: B1082377
Date Reported: 06/20/08
Date / Time Received: 06/17/08 12:33

Sampling Point: Vector SJ/SC-C 2514 C
Date Collected: 6/17/2008
Sampled By: Vector
Incubation Time (hours): 50.2 hours

Lab Number: 1082377-4
Method Used: Pour Plate Method (SM 18th Ed., 9215 B)
Medium Used: Tryptone Glucose Yeast Agar
Incubation Temperature: 35 °C

The sample contained **1779500** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

Sampling Point: Vector DI-C 2514-K
Date Collected: 6/17/2008
Sampled By: Vector
Incubation Time (hours): 50.2 hours

Lab Number: 1082377-3
Method Used: Pour Plate Method (SM 18th Ed., 9215 B)
Medium Used: Tryptone Glucose Yeast Agar
Incubation Temperature: 35 °C

The sample contained **30200** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

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Job Number: 1082377 **Date Reported:** 06/20/08 **Client Name:** Vector Engineering

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Sampling Point:	SCRWA-D 2514-H	**Lab Number:**	1082377-2
Date Collected:	6/17/2008	**Method Used:**	Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By:	Vector	**Medium Used:**	Tryptone Glucose Yeast Agar
Incubation Time (hours):	50.2 hours	**Incubation Temperature:**	35 °C

The sample contained **308000** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

Sampling Point:	Vector SCRWA-C/2514 G	**Lab Number:**	1082377-1
Date Collected:	6/17/2008	**Method Used:**	Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By:	Vector	**Medium Used:**	Tryptone Glucose Yeast Agar
Incubation Time (hours):	50.2 hours	**Incubation Temperature:**	35 °C

The sample contained **1763500** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

Ralph G. McKnight

Approved By

Cranmer
Analytical
Laboratory

JUL 01 2008

Heterotrophic Plate Count

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: B1082475
Date Reported: 06/27/08
Date / Time Received: 06/24/08 14:10

Sampling Point:	SJ/SC-D 2514D	**Lab Number:**	1082475-1
Date Collected:	6/24/2008	**Method Used:**	Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By:	Vector	**Medium Used:**	Tryptone Glucose Yeast Agar
Incubation Time (hours):	45.9 hours	**Incubation Temperature:**	35 °C

The sample contained **< 1** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank:	<1.0	CFU/mL
Dilution Blank:	<1.0	CFU/mL

Approved By

JUL 1 0 2008

Cranmer
Analytical
Laboratory

Heterotrophic Plate Count

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: B1082584
Date Reported: 07/02/08
Date / Time Received: 06/30/08 14:02

Sampling Point: DI-1 2514P
Date Collected: 6/30/2008
Sampled By: Vector
Incubation Time (hours): 46.8 hours

Lab Number: 1082584-4
Method Used: Pour Plate Method (SM 18th Ed., 9215 B)
Medium Used: Tryptone Glucose Yeast Agar
Incubation Temperature: 35 °C

The sample contained **16495** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank: <1.0 CFU/mL

Sampling Point: SCRWA-B 2514F
Date Collected: 6/30/2008
Sampled By: Vector
Incubation Time (hours): 46.8 hours

Lab Number: 1082584-3
Method Used: Pour Plate Method (SM 18th Ed., 9215 B)
Medium Used: Tryptone Glucose Yeast Agar
Incubation Temperature: 35 °C

The sample contained **56550** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank: <1.0 CFU/mL

---

cc: Vector Engineering

Job Number: 1082584 **Date Reported:** 07/02/08 **Client Name:** Vector Engineering

---

Sampling Point:	SJ/SC-1 2514L	**Lab Number:**	1082584-2
Date Collected:	6/30/2008	**Method Used:**	Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By:	Vector	**Medium Used:**	Tryptone Glucose Yeast Agar
Incubation Time (hours):	46.8 hours	**Incubation Temperature:**	35 °C

The sample contained **41765** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank: <1.0 CFU/mL

Sampling Point:	SCRWA-1 2514N	**Lab Number:**	1082584-1
Date Collected:	6/30/2008	**Method Used:**	Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By:	Vector	**Medium Used:**	Tryptone Glucose Yeast Agar
Incubation Time (hours):	46.8 hours	**Incubation Temperature:**	35 °C

The sample contained **24295** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank: <1.0 CFU/mL

---

cc: Vector Engineering

Approved By

JUL 10 2008

Cranmer
Analytical
Laboratory

Heterotrophic Plate Count

1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Vector Engineering
143E Spring Hill Drive
Grass Valley CA 95945

Job Number: B1082626
Date Reported: 07/07/08
Date / Time Received: 07/02/08 11:40

Sampling Point:	SJ/SC-2 2514M	**Lab Number:**	1082626-3
Date Collected:	7/2/2008	**Method Used:**	Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By:	Vector	**Medium Used:**	Tryptone Glucose Yeast Agar
Incubation Time (hours):	45.7 hours	**Incubation Temperature:**	35 °C

The sample contained **68090** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank: <1.0 CFU/mL

Sampling Point:	DI-2 2514Q	**Lab Number:**	1082626-2
Date Collected:	7/2/2008	**Method Used:**	Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By:	Vector	**Medium Used:**	Tryptone Glucose Yeast Agar
Incubation Time (hours):	45.7 hours	**Incubation Temperature:**	35 °C

The sample contained **935** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank: <1.0 CFU/mL

---

cc: Vector Engineering

CRANMER ANALYTICAL LABORATORY 1188 East Main Street, Grass Valley, CA 95945-5710 (530) 273-7284, FAX (530) 273-9507 E.L.A.P. Certification No. 1936

Job Number: 1082626 **Date Reported:** 07/07/08 **Client Name:** Vector Engineering

Sampling Point:	SCRWA-2 2514O	**Lab Number:**	1082626-1
Date Collected:	7/2/2008	**Method Used:**	Pour Plate Method (SM 18th Ed., 9215 B)
Sampled By:	Vector	**Medium Used:**	Tryptone Glucose Yeast Agar
Incubation Time (hours):	45.7 hours	**Incubation Temperature:**	35 °C

The sample contained **33635** colony-forming units per milliliter (CFU/mL)

Quality Control

Media Blank: <1.0 CFU/mL

cc: Vector Engineering

Approved By

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Aug 01 2008
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA

Report#: 246257
Project: RECLAIMED
PO#: 27011-07-320

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are QC Report,QC Summary,Data Report,Hits Report, totaling 4 page[s].

246257

8062667 Gi 0712CE

G 125ml plastic

1 of 4

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER: 27011-07-3200
SAMPLERS: Vector (PRINT)
Susan Steward (SIGN)
RECORDER ____ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
A. 40-ml VOA Vial B. Glass Liter C. Plastic 500-ml D. Plastic Liter E. Brass Tube F. Other 250 plastic ml	A. Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment F. Oil G. Waste H. Blank/Spike I Other ____	1. Standard 2. 48 Hour 3. 24 Hour 4. Other ____

ANALYTICAL LAB Weck Lab

LABORATORY USE ONLY

LAB PROJECT NO. ____

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO3	HCL	NaOH	Field Filtered (check)	Alkalinity Total	Bicarb Alkalin	Boron	Calcium	Magnesium	Sodium	Potassium	Cyanide	PFC	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	~~6/24~~	~~16:00~~	~~SCRWA-1 2514N~~																										
2	~~↓~~	~~↓~~	~~SCRWA-1 2514N~~																										
3	~~6/23~~	~~15:00~~	~~SCRWA-B 2514F~~				C	G	X					X	X								1	14day					
4	~~6/24~~	~~17:00~~	~~DI-1 2514P~~				F			X						X	X	X	X	X				180day					
5	~~6/23~~	~~15:00~~	~~SCRWA-B 2514F~~				F			X						X	X	X	X	X				↓					
6	~~6/24~~	~~17:00~~	~~DI-1 2514P~~				F			X						X	X	X	X	X									
7	~~↓~~	~~↓~~	~~↓ ↓~~				C		X					X	X									14day					
8	~~6/24~~	~~16:00~~	~~SCRWA-1 2514N~~				C		X	X				X	X									↓					
9	↓	↓	ISCRWA-1 2514N				P					X												14day					
10	↓	17:00	DI-1 2514P				C					X										X							
11							G		X													X		↓					
12							P	✓	X													X							
13																						X		↓			DID NOT REC		
14																													
15																													
16																													

For MWH

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time
OnTrac Courier	Ice Chest		Susan Steward	6/25/08	

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Susan Steward 10			
7/2/08			
		7-3-8	11:24
	Received for lab By: (Signature) James 6/26/08		10:30

Send Lab Results to (Name): Norman Wang (Check Office Below)

Verbals Requested: Yes ☐ No ☐

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☐ OTHER ____ TEL ____ FAX ____

2.7°C

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MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 246257
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **07/03/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id Tests Scheduled	Matrix	Sample Date
2807030384	SCRWA-1 2514N @PFC	Water	24-jun-2008 16:00:00

Test Acronym Description

Test Acronym	Description
@PFC	Perfluorinated compounds

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#246257

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
03-jul-2008 14:21:58

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2807030384	SCRWA-1 2514N				
07/05/08	Perfluoro octanoic acid - PFOA		39		ng/l	20

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data Report #246257

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
07/03/08

SCRWA-1 2514N (2807030384) **Sampled on 06/24/08 16:00**

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 05:51	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 05:51	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	39	ng/l	20	1
	07/05/08 05:51	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	112	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		

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Laboratory
QC Summary
#246257

Locus Technologies

QC Ref #441250 - Perfluorinated compounds **Analysis Date: 07/05/2008**

2807030384 SCRWA-1 2514N Analyzed by: ali

MWH Laboratories
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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
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Laboratory
QC Report
#246257

Locus Technologies

QC Ref #441250 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	20	24.4	NGL	122.0	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	50	53.7	NGL	107.4	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	114	NGL	114.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<50	NGL			
LCS1	Perfluoro octanoic acid - PFOA	20	19	NGL	95.0	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	50	58.8	NGL	117.6	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	89	NGL	89.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<20	NGL			
LCS1	Perfluoro octanesulfonate-PFOS	20	25.6	NGL	128.0	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	50	52.0	NGL	104.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	97.9	NGL	97.9	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<50	NGL			
LCS1	Internal Standard	100	112	%R	112.0	(80-120)	
LCS2	Internal Standard	100	108	%R	108.0	(80-120)	
LCS3	Internal Standard	100	109	%R	109.0	(80-120)	
MBLK	Internal Standard	ND	98	%R			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories
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750 Royal Oaks Drive
Suite 100
Monrovia, California 91016-3629
Tel: 626 568 6400
Fax: 626 568 6324
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

REVISED

DATE OF ISSUE
Apr 10 2009
MWH LABORATORIES

01114CA

JAU Joseph A Ureno
Project Manager

Report#: 246072
Project: RECLAIMED
PO#: 27011-07-320

This report shall not be reproduced except in full, without the written approval of the laboratory.
Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report, totaling 23 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
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Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **07/02/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2807020310	DI-2 2514Q	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	01-jul-2008 11:00:00
2807020311	SCRWA-2 2514Q	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	01-jul-2008 10:00:00
2807020312	SJ/SC-2 2514M	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	01-jul-2008 10:00:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

2° ON ICE

246072

1 of 1

6 125 ml plastic

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Beach Test

SAMPLERS: Vector (PRINT)

(SIGN)

PROJECT NUMBER: 27011-07-3200

RECORDER: Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 125 ml glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB: MWH Lab

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO3	HCL	thio	Field Filtered (check)	525.1	NDMA	EDTA	NTA	PFC					TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
2L 1	7/1	11:00	DI-2 2514Q				B	G			X		X	X									1	14day					
2	↓	↓	" "				↓	↓			X			X	X								1	↓					
2L 3		10:00	SCRWA-2 2514O								X			X									1						
4		"	" "								X			X									1						
3L 5		↓	SJ/SC-2 2514M								X			X	X								1						
6											X			X									1						
7		↓	↓ ↓								X			X									1	↓					
8		10:30	SCRWA2 2514O									X			X								1	7day					
9		11:00	↓ ↓				↓	↓				X			X								1	↓					
10		10:00	SJ/SC-2 2514M				F	G	X							X	X							28day					
11		10:30	SCRWA-2 2514O				F	G	X							X	X												
12	↓	11:00	DI-2 2514Q				F	G	X							X	X							↓					
13		10:00	SJ/SC-2 2514M				G		X									X						14day					
14		10:30	SCRWA-2 2514Q						X									X											
15		11:00	DI-2 2514Q				↓	↓	X									X						↓					
16																													

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
	Joe Samaly	7-2-08	9:00
Susan Stewart			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
OnTrac Courier	Icechest		Susan Stewart 7/1/08					

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive
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Monrovia, California 91016-3629
Tel: 626 568 6400
Fax: 626 568 6324
1 800 566 LABS (1 800 566 5227)

Report Comments #246072

Group Comments

Endrin Aldehyde (EPA 525.2) MS was low and the MS was a Locus Technologies sample. Also, LCS RPDs for 2,4-Dinitrotoluene, Caffeine and Dimethoate were all high. However, EPA 525.2 data is acceptable, based on passing LCS/other QC for the batch.

NDMA detected in the method blank below the reporting MRL. Data is acceptable since detected results are >5 times blank detection (0.62 mg/L) and LCS/other QC also passed acceptance criteria.

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Laboratory Hits Report #246072

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
02-jul-2008 13:05:08

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2807020310	**DI-2 2514Q**				
07/10/08	N-Nitroso dimethylamine (NDMA)		8.7		ng/l	2.0
07/05/08	Perfluoro octanoic acid - PFOA		88		ng/l	20
07/09/08	EDTA by Ion Chrom-Subcontract		100		ug/l	100
	2807020311	**SCRWA-2 2514O**				
07/10/08	N-Nitroso dimethylamine (NDMA)		4.0		ng/l	2.0
07/09/08	EDTA by Ion Chrom-Subcontract		266		ug/l	100
	2807020312	**SJ/SC-2 2514M**				
07/14/08	Diethylphthalate		1.3		ug/l	0.5
07/15/08	N-Nitroso dimethylamine (NDMA)		375		ng/l	8.0
07/05/08	Perfluoro octanoic acid - PFOA		80		ng/l	20
07/09/08	EDTA by Ion Chrom-Subcontract		159		ug/l	100

SUMMARY OF POSITIVE DATA ONLY.

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**Laboratory
Data Report
#246072**

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
07/02/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
DI-2 2514Q (2807020310)				**Sampled on 07/01/08 11:00**				
	07/09/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**100**	**ug/l**	**100**	**1**
	07/09/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**
				525 Semivolatiles by GC/MS				
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/10/08	07/14/08 21:22	439144	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	108	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	80	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	102	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 00:00	436346	(EPA 521/1625)	N-Nitroso dimethylamine (NDMA)	8.7	ng/l	2.0	1
			(EPA 521/1625)	NDMA-D6(50-150)-Int Std	69	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 05:48	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 05:48	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	88	ng/l	20	1
	07/05/08 05:48	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	112	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		

SCRWA-2 2514O (2807020311) Sampled on 07/01/08 10:30

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/09/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**266**	**ug/l**	**100**	**1**
	07/09/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Endrin Aldehyde	ND(M2)	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/10/08	07/14/08 21:45	439144	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	69	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	103	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	102	% Rec		
			N-Nitroso dimethylamine (NDMA)					
07/02/08	07/10/08 00:00	436346	(EPA 521/1625)	N-Nitroso dimethylamine (NDMA)	4.0	ng/l	2.0	1
			(EPA 521/1625)	NDMA-D6(50-150)-Int Std	74	% Rec		
			Perfluorinated compounds					
	07/05/08 05:50	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 05:50	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	07/05/08 05:50	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOS-C13	NA	% Rec		
			(MWH PFC)	PFOA-C13	94	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		
SJ/SC-2 2514M (2807020312)				**Sampled on 07/01/08 10:00**				
	07/09/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**159**	**ug/l**	**100**	**1**
	07/09/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**
			525 Semivolatiles by GC/MS					
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Diethylphthalate	1.3	ug/l	0.5	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/10/08	07/14/08 22:08	439144	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	107	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	90	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	100	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/15/08 00:00	436346	(EPA 521/1625)	N-Nitroso dimethylamine (NDMA)	375	ng/l	8.0	4
			(EPA 521/1625)	NDMA-D6(50-150)-Int Std	80	% Rec		

Locus Technologies
(continued)

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 05:50	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 05:50	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	80	ng/l	20	1
	07/05/08 05:50	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOS-C13	NA	% Rec		
			(MWH PFC)	PFOA-C13	110	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		

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Laboratory
QC Summary
#246072

Locus Technologies

QC Ref #436346 - N-Nitroso dimethylamine (NDMA) Analysis Date: 07/10/2008

2807020310	DI-2 2514Q
2807020311	SCRWA-2 2514O
2807020312	SJ/SC-2 2514M

QC Ref #439144 - 525 Semivolatiles by GC/MS Analysis Date: 07/14/2008

2807020310	DI-2 2514Q
2807020311	SCRWA-2 2514O
2807020312	SJ/SC-2 2514M

QC Ref #441250 - Perfluorinated compounds Analysis Date: 07/05/2008

2807020310	DI-2 2514Q
2807020311	SCRWA-2 2514O
2807020312	SJ/SC-2 2514M

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Laboratory
QC Report
#246072

Locus Technologies

QC Ref #436346 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	06300176	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.17	NGL	108.5	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.52	NGL	126.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	0.62	NGL	_		
MS	N-Nitroso dimethylamine (NDMA)	10	9.77	NGL	97.7	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	9.93	NGL	99.3	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	108.500	126.000	NGL	14.9	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	97.700	99.300	NGL	1.6	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	82	%R	82.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	84	%R	84.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	67	%R	67.0		
MS	NDMA-d6(Internal Standard)	100	88	%R	88.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	90	%R	90.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	82.000	84.000	%R	2.4	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	88.000	90.000	%R	2.2	(0-20)	

QC Ref #439144 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.40	UGL	70.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.72	UGL	86.0	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	70.000	86.000	UGL	20.5	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.41	UGL	70.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.70	UGL	85.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.82	UGL	91.0	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	70.500	85.000	UGL	18.6	(0-20)	
LCS1	Alpha-BHC	2	1.97	UGL	98.5	(70-130)	
LCS2	Alpha-BHC	2	2.06	UGL	103.0	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MS	Alpha-BHC	2	2.00	UGL	100.0	(70-130)
LCS1	alpha-Chlordane	2	1.90	UGL	95.0	(70-130)
LCS2	alpha-Chlordane	2	1.97	UGL	98.5	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.81	UGL	90.5	(70-130)
RPD_LCS	alpha-Chlordane	95.000	98.500	UGL	3.6	(0-20)
LCS1	Diazinon (Qualitative)	2	1.94	UGL	97.0	(70-130)
LCS2	Diazinon (Qualitative)	2	1.99	UGL	99.5	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	97.000	99.500	UGL	2.5	(0-20)
MS	Spiked sample	Lab # 28	07020311	NONE		(0-0)
LCS1	Acenaphthene	2	1.87	UGL	93.5	(70-130)
LCS2	Acenaphthene	2	1.91	UGL	95.5	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Acenaphthene	93.500	95.500	UGL	2.1	(0-20)
LCS1	Acenaphthylene	2	1.88	UGL	94.0	(70-130)
LCS2	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Acenaphthylene	94.000	100.500	UGL	6.7	(0-20)
LCS1	Acetochlor	2	2.11	UGL	105.5	(70-130)
LCS2	Acetochlor	2	2.13	UGL	106.5	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Acetochlor	105.500	106.500	UGL	0.9	(0-20)
LCS1	Alachlor	2	2.01	UGL	100.5	(70-130)
LCS2	Alachlor	2	2.16	UGL	108.0	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Alachlor	100.500	108.000	UGL	7.2	(0-20)
LCS1	Aldrin	2	1.72	UGL	86.0	(70-130)
LCS2	Aldrin	2	1.78	UGL	89.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.78	UGL	89.0	(70-130)

RPD_LCS	Aldrin	86.000	89.000	UGL	3.4	(0-20)
LCS1	Anthracene	2	1.83	UGL	91.5	(70-130)
LCS2	Anthracene	2	1.84	UGL	92.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Anthracene	91.500	92.000	UGL	0.5	(0-20)
LCS1	Atrazine	2	2.05	UGL	102.5	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Atrazine	102.500	108.500	UGL	5.7	(0-20)
LCS1	Benz(a)Anthracene	2	1.90	UGL	95.0	(70-130)
LCS2	Benz(a)Anthracene	2	1.90	UGL	95.0	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	1.73	UGL	86.5	(70-130)
RPD_LCS	Benz(a)Anthracene	95.000	95.000	UGL	0.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.02	UGL	101.0	(70-130)
LCS2	Benzo(a)pyrene	2	1.99	UGL	99.5	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	1.91	UGL	95.5	(70-130)
RPD_LCS	Benzo(a)pyrene	101.000	99.500	UGL	1.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.02	UGL	101.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.09	UGL	104.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	101.000	104.500	UGL	3.4	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	2.02	UGL	101.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.86	UGL	93.0	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	104.500	101.000	UGL	3.4	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.07	UGL	103.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

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Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	103.500	98.500	UGL	5.0	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	2.17	UGL	108.5	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	2.21	UGL	110.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	2.02	UGL	101.0	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	108.500	110.500	UGL	1.8	(0-20)
LCS1	Beta-BHC	2	1.97	UGL	98.5	(70-130)
LCS2	Beta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.00	UGL	100.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.19	UGL	109.5	(70-130)
LCS2	Butylbenzylphthalate	2	2.20	UGL	110.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Butylbenzylphthalate	109.500	110.000	UGL	0.5	(0-20)
LCS1	Bromacil	2	1.96	UGL	98.0	(70-130)
LCS2	Bromacil	2	2.13	UGL	106.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Bromacil	98.000	106.500	UGL	8.3	(0-20)
LCS1	Butachlor	2	2.16	UGL	108.0	(70-130)
LCS2	Butachlor	2	2.23	UGL	111.5	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Butachlor	108.000	111.500	UGL	3.2	(0-20)
LCS1	Caffeine by method 525mod	2	1.25	UGL	62.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.58	UGL	79.0	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MS	Caffeine by method 525mod	2	1.72	UGL	86.0	(46-144)
RPD_LCS	Caffeine by method 525mod	62.500	79.000	UGL	23.3	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.06	UGL	103.0	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.08	UGL	104.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

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MS	Chlorothalonil(Draconil,Bravo)	2	1.94	UGL	97.0	(70-130)
LCS1	Chrysene	2	1.98	UGL	99.0	(70-130)
LCS2	Chrysene	2	1.99	UGL	99.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Chrysene	99.000	99.500	UGL	0.5	(0-20)
LCS1	Chlorobenzilate	2	2.14	UGL	107.0	(70-130)
LCS2	Chlorobenzilate	2	2.18	UGL	109.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Chlorobenzilate	107.000	109.000	UGL	1.9	(0-20)
LCS1	Chloroneb	2	1.98	UGL	99.0	(70-130)
LCS2	Chloroneb	2	2.01	UGL	100.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.02	UGL	101.0	(70-130)
RPD_LCS	Chloroneb	99.000	100.500	UGL	1.5	(0-20)
LCS1	Delta-BHC	2	2.04	UGL	102.0	(70-130)
LCS2	Delta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.01	UGL	100.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	1.75	UGL	87.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	101.500	100.500	UGL	1.0	(0-20)
LCS1	4,4'-DDD	2	2.15	UGL	107.5	(70-130)
LCS2	4,4'-DDD	2	2.13	UGL	106.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.01	UGL	100.5	(70-130)
RPD_LCS	4,4'-DDD	107.500	106.500	UGL	0.9	(0-20)
LCS1	4,4'-DDE	2	1.85	UGL	92.5	(70-130)
LCS2	4,4'-DDE	2	1.86	UGL	93.0	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.71	UGL	85.5	(70-130)
RPD_LCS	4,4'-DDE	92.500	93.000	UGL	0.5	(0-20)

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Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	4,4'-DDT	2	2.05	UGL	102.5	(70-130)
LCS2	4,4'-DDT	2	2.03	UGL	101.5	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.500	101.500	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	1.90	UGL	95.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.08	UGL	104.0	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	95.000	104.000	UGL	9.0	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.05	UGL	102.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	2.08	UGL	104.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	102.500	104.000	UGL	1.5	(0-20)
LCS1	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
LCS2	Diethylphthalate	2	2.25	UGL	112.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.37	UGL	118.5	(70-130)
RPD_LCS	Diethylphthalate	106.500	112.500	UGL	5.5	(0-20)
LCS1	Dieldrin	2	2.14	UGL	107.0	(70-130)
LCS2	Dieldrin	2	2.10	UGL	105.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Dieldrin	107.000	105.000	UGL	1.9	(0-20)
LCS1	Dimethylphthalate	2	2.01	UGL	100.5	(70-130)
LCS2	Dimethylphthalate	2	2.14	UGL	107.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Dimethylphthalate	100.500	107.000	UGL	6.3	(0-20)
LCS1	Dimethoate	2	1.02	UGL	51.0	(35-100)
LCS2	Dimethoate	2	1.27	UGL	63.5	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.36	UGL	68.0	(34-111)
RPD_LCS	Dimethoate	51.000	63.500	UGL	21.8	(0-20)
LCS1	Di-n-Butylphthalate	4	4.30	UGL	107.5	(70-130)

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LCS2	Di-n-Butylphthalate	4	4.38	UGL	109.5	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	4.12	UGL	103.0	(70-130)
RPD_LCS	Di-n-Butylphthalate	107.500	109.500	UGL	1.8	(0-20)
LCS1	Di-N-octylphthalate	2	1.73	UGL	86.5	(70-130)
LCS2	Di-N-octylphthalate	2	1.76	UGL	88.0	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.67	UGL	83.5	(70-130)
RPD_LCS	Di-N-octylphthalate	86.500	88.000	UGL	1.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.11	UGL	105.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	103.500	105.500	UGL	1.9	(0-20)
LCS1	Endrin Aldehyde	2	1.73	UGL	86.5	(70-130)
LCS2	Endrin Aldehyde	2	1.97	UGL	98.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.03	UGL	51.5	(70-130)
LCS1	Endrin	2	1.88	UGL	94.0	(70-130)
LCS2	Endrin	2	2.03	UGL	101.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Endrin	94.000	101.500	UGL	7.7	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	2.14	UGL	107.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.10	UGL	105.0	(70-130)
RPD_LCS	EPTC	100.500	107.000	UGL	6.3	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.79	UGL	89.5	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.87	UGL	93.5	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.87	UGL	93.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.12	UGL	106.0	(70-130)
LCS2	Endosulfan II (Beta)	2	2.04	UGL	102.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	2.11	UGL	105.5	(70-130)

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LCS1	Endosulfan Sulfate	2	2.04	UGL	102.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.12	UGL	106.0	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.90	UGL	95.0	(70-130)
LCS1	Fluoranthene	2	2.04	UGL	102.0	(70-130)
LCS2	Fluoranthene	2	2.10	UGL	105.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Fluoranthene	102.000	105.000	UGL	2.9	(0-20)
LCS1	Fluorene	2	1.97	UGL	98.5	(70-130)
LCS2	Fluorene	2	2.01	UGL	100.5	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Fluorene	98.500	100.500	UGL	2.0	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.16	UGL	108.0	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	108.000	UGL	7.2	(0-20)
LCS1	Hexachlorobenzene	2	1.93	UGL	96.5	(70-130)
LCS2	Hexachlorobenzene	2	1.95	UGL	97.5	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Hexachlorobenzene	96.500	97.500	UGL	1.0	(0-20)
LCS1	Hexachlorocyclopentadiene	2	1.81	UGL	90.5	(70-130)
LCS2	Hexachlorocyclopentadiene	2	1.84	UGL	92.0	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	90.500	92.000	UGL	1.6	(0-20)
LCS1	Heptachlor	2	1.96	UGL	98.0	(70-130)
LCS2	Heptachlor	2	1.96	UGL	98.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.020	UGL	100.0	(50-150)
MS	Heptachlor	2	1.92	UGL	96.0	(70-130)
RPD_LCS	Heptachlor	98.000	98.000	UGL	0.0	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.08	UGL	104.0	(70-130)

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LCS2	Heptachlor Epoxide (isomer B)	2	2.05	UGL	102.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	104.000	102.500	UGL	1.5	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.01	UGL	100.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.01	UGL	100.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	100.500	100.500	UGL	0.0	(0-20)
LCS1	Isophorone	2	1.84	UGL	92.0	(70-130)
LCS2	Isophorone	2	2.00	UGL	100.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.90	UGL	95.0	(70-130)
RPD_LCS	Isophorone	92.000	100.000	UGL	8.3	(0-20)
LCS1	Lindane	2	1.89	UGL	94.5	(70-130)
LCS2	Lindane	2	1.95	UGL	97.5	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	1.92	UGL	96.0	(70-130)
RPD_LCS	Lindane	94.500	97.500	UGL	3.1	(0-20)
LCS1	Methoxychlor	2	2.08	UGL	104.0	(70-130)
LCS2	Methoxychlor	2	2.11	UGL	105.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Methoxychlor	104.000	105.500	UGL	1.4	(0-20)
LCS1	Metribuzin	2	1.81	UGL	90.5	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.80	UGL	90.0	(70-130)
RPD_LCS	Metribuzin	90.500	105.000	UGL	14.8	(0-20)
LCS1	Malathion	2	2.21	UGL	110.5	(70-130)
LCS2	Malathion	2	2.26	UGL	113.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.28	UGL	114.0	(70-130)
RPD_LCS	Malathion	110.500	113.000	UGL	2.2	(0-20)
LCS1	Molinate	2	2.02	UGL	101.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
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LCS2	Molinate	2	2.12	UGL	106.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Molinate	101.000	106.000	UGL	4.8	(0-20)
LCS1	Metolachlor	2	2.14	UGL	107.0	(70-130)
LCS2	Metolachlor	2	2.19	UGL	109.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Metolachlor	107.000	109.500	UGL	2.3	(0-20)
LCS1	Naphthalene	2	1.87	UGL	93.5	(70-130)
LCS2	Naphthalene	2	1.90	UGL	95.0	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MS	Naphthalene	2	1.86	UGL	93.0	(70-130)
RPD_LCS	Naphthalene	93.500	95.000	UGL	1.6	(0-20)
LCS1	trans-Nonachlor	2	1.92	UGL	96.0	(70-130)
LCS2	trans-Nonachlor	2	1.92	UGL	96.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	1.78	UGL	89.0	(70-130)
RPD_LCS	trans-Nonachlor	96.000	96.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	8.06	UGL	100.8	(70-130)
LCS2	Pentachlorophenol	8	8.56	UGL	107.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	9.63	UGL	120.4	(70-130)
RPD_LCS	Pentachlorophenol	100.750	107.000	UGL	6.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.89	UGL	97.2	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.91	UGL	97.8	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.76	UGL	94.0	(70-130)
RPD_LCS	Permethrin (mixed isomers)	97.250	97.750	UGL	0.5	(0-20)
LCS1	Phenanthrene	2	1.93	UGL	96.5	(70-130)
LCS2	Phenanthrene	2	1.94	UGL	97.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.86	UGL	93.0	(70-130)
RPD_LCS	Phenanthrene	96.500	97.000	UGL	0.5	(0-20)
LCS1	Propachlor	2	2.08	UGL	104.0	(70-130)

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LCS2	Propachlor	2	2.25	UGL	112.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Propachlor	104.000	112.500	UGL	7.9	(0-20)
LCS1	Parathion	2	2.05	UGL	102.5	(70-130)
LCS2	Parathion	2	2.14	UGL	107.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Parathion	102.500	107.000	UGL	4.3	(0-20)
LCS1	Pyrene	2	2.02	UGL	101.0	(70-130)
LCS2	Pyrene	2	2.04	UGL	102.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Pyrene	101.000	102.000	UGL	1.0	(0-20)
LCS1	Simazine	2	1.93	UGL	96.5	(70-130)
LCS2	Simazine	2	2.22	UGL	111.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	96.500	111.000	UGL	14.0	(0-20)
LCS1	Perylene-d12	100	92	%R	92.0	(70-130)
LCS2	Perylene-d12	100	90	%R	90.0	(70-130)
MBLK	Perylene-d12	100	78	%R	78.0	
MRLLW	Perylene-d12	100	80	%R	80.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	101	%R	101.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	99	%R	99.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	100	%R	100.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	100	%R	100.0	(70-130)
LCS1	Triphenylphosphate	100	105	%R	105.0	(70-130)
LCS2	Triphenylphosphate	100	104	%R	104.0	(70-130)
MBLK	Triphenylphosphate	100	102	%R	102.0	
MRLLW	Triphenylphosphate	100	97	%R	97.0	(70-130)
MS	Triphenylphosphate	100	101	%R	101.0	(70-130)
LCS1	Thiobencarb (ELAP Cert)	2	2.11	UGL	105.5	(70-130)
LCS2	Thiobencarb (ELAP Cert)	2	2.16	UGL	108.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Thiobencarb (ELAP Cert)	ND	<0.2	UGL		
MS	Thiobencarb (ELAP Cert)	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Thiobencarb (ELAP Cert)	105.500	108.000	UGL	2.3	(0-20)
LCS1	Terbacil	2	2.12	UGL	106.0	(70-130)
LCS2	Terbacil	2	2.35	UGL	117.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Terbacil	106.000	117.500	UGL	10.3	(0-20)
LCS1	Trifluralin	2	2.04	UGL	102.0	(70-130)
LCS2	Trifluralin	2	2.11	UGL	105.5	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Trifluralin	102.000	105.500	UGL	3.4	(0-20)

QC Ref #441250 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	20	24.4	NGL	122.0	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	50	53.7	NGL	107.4	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	114	NGL	114.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
LCS1	Perfluoro octanoic acid - PFOA	20	19	NGL	95.0	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	50	58.8	NGL	117.6	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	89	NGL	89.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
LCS1	Perfluoro octanesulfonate-PFOS	20	25.6	NGL	128.0	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	50	52.0	NGL	104.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	97.9	NGL	97.9	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
LCS1	Internal Standard	100	112	%R	112.0	(80-120)	
LCS2	Internal Standard	100	108	%R	108.0	(80-120)	
LCS3	Internal Standard	100	109	%R	109.0	(80-120)	
MBLK	Internal Standard	ND	98	%R			

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MWH Laboratories
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Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

REVISED

DATE OF ISSUE
Apr 10 2009
MWH LABORATORIES

01114CA

JAU Joseph A Ureno
Project Manager

Report#: 245968
Project: RECLAIMED
PO#: 27011-07-320

This report shall not be reproduced except in full, without the written approval of the laboratory.
Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report, totaling 34 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 245968
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **07/01/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2807010433	SCRWA-B 2514F	@525PLUS	Water	26-jun-2008 11:30:00
2807010434	SJ/SC 2514L	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	27-jun-2008 10:30:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

24M100

1 of 1

6° ON ICE

G. 125 ml Plastic Bottle

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test

SAMPLERS: Vector (PRINT)

Susan Stewart (SIGN)

PROJECT NUMBER: 27011-07-3200

RECORDER: ______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 125 ml 4 [illegible]

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB: MWH Lab

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO$_3$	HCL	Thio	Field Filtered (check)	ANALYSIS REQUESTED: EPA 525	EPA 1625 (NDMA)	EPA 300 NTA	EPA 300 EDTA	PFC				TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/26	11:30	SCRWA-B 2514 F				B	G			X			X								1	14d					
2	6/27	16:30	SJ/SC 2514 L				B	G			X			X								1	↓					
3	↓	↓					B	G			X			X								1						
4							B	G				X			X							1	7d					
5							F	G	X							X	X					1	28d					
6							G	G	X									X				1	14d					
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

WWW.CALO

B10206013666

NOTES / MISCELLANEOUS

Sampled by Vector Eng.

Container Sealed with Custody Seal: Yes ☐ No ☐

Field / Container Temp.

Relinquished By: (Signature)	Received By: (Signature) Joe Sanchez	Date 7-1-08	Time 9:00
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Ice chest		Susan Stewart	6/30/08				

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

MWH Laboratories
A Division of MWH Americas, Inc.

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Report Comments #245968

Group Comments

Anthracene LCS2 RPD was low and Propachlor MRL recovery was high (EPA 525.2). These compunds have been flaged (L4 and LE respectively). Also, RPD recoveries for 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Benzo(a)pyrene, Caffeine and Dimethoate were outside of lab acceptance limits. Data for all compounds is acceptable, however, based on passing LCS1 and other QC. MS recoveries for several compounds were outside of acceptance limits as well, but the MS was not a Locus Technologies sample.

NDMA detected in the method blank below the reporting MRL. Data is acceptable since detected results are >10 times blank detection (0.62 mg/L) and LCS/other QC also passed acceptance criteria.

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Laboratory Hits Report #245968

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
01-jul-2008 17:02:11

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2807010433	**SCRWA-B 2514F**				
07/15/08	Caffeine by method 525mod		0.5		ug/l	0.02
	2807010434	**SJ/SC 2514L**				
07/12/08	Diethylphthalate		1.3		ug/l	0.5
07/15/08	N-Nitroso dimethylamine (NDMA)		349		ng/l	8.0
07/05/08	Perfluoro octanoic acid - PFOA		109		ng/l	20

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

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Monrovia, California 91016-3629
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**Laboratory
Data Report
#245968**

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
07/01/08

SCRWA-B 2514F (2807010433) Sampled on 06/26/08 11:30

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Anthracene	ND(L4)	ug/l	0.02	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Caffeine by method 525mod	0.5	ug/l	0.02	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Propachlor	ND(LE)	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/09/08	07/15/08 02:16	438468	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	94	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	108	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	101	% Rec		

SJ/SC 2514L (2807010434) Sampled on 06/27/08 10:30

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/03/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**ND**	**ug/l**	**100**	**1**
	07/03/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Diethylphthalate	1.3	ug/l	0.5	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/09/08	07/12/08 19:59	438717	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	90	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	108	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	102	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/15/08 00:00	436346	(EPA 521/1625)	N-Nitroso dimethylamine (NDMA)	349	ng/l	8.0	4
			(EPA 521/1625)	NDMA-D6(50-150)-Int Std	88	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 05:47	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 05:47	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	109	ng/l	20	1
	07/05/08 05:47	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	107	% Rec		

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
			(MWH PFC)	PFBA-C13	NA	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		

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Laboratory
QC Summary
#245968

Locus Technologies

QC Ref #436346 - N-Nitroso dimethylamine (NDMA) Analysis Date: 07/15/2008

2807010434	SJ/SC 2514L

QC Ref #438468 - 525 Semivolatiles by GC/MS Analysis Date: 07/15/2008

2807010433	SCRWA-B 2514F

QC Ref #438717 - 525 Semivolatiles by GC/MS Analysis Date: 07/12/2008

2807010434	SJ/SC 2514L

QC Ref #441250 - Perfluorinated compounds Analysis Date: 07/05/2008

2807010434	SJ/SC 2514L

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Laboratory
QC Report
#245968

Locus Technologies

QC Ref #436346 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	06300176	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.17	NGL	108.5	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.52	NGL	126.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	0.62	NGL	_		
MS	N-Nitroso dimethylamine (NDMA)	10	9.77	NGL	97.7	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	9.93	NGL	99.3	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	108.500	126.000	NGL	14.9	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	97.700	99.300	NGL	1.6	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	82	%R	82.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	84	%R	84.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	67	%R	67.0		
MS	NDMA-d6(Internal Standard)	100	88	%R	88.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	90	%R	90.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	82.000	84.000	%R	2.4	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	88.000	90.000	%R	2.2	(0-20)	

QC Ref #438468 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	2.02	UGL	101.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.55	UGL	77.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.66	UGL	83.0	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	101.000	77.500	UGL	26.3	(0-20)	
LCS1	2,6-Dinitrotoluene	2	2.02	UGL	101.0	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.57	UGL	78.5	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.65	UGL	82.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	101.000	78.500	UGL	25.1	(0-20)	
LCS1	Alpha-BHC	2	2.39	UGL	119.5	(70-130)	
LCS2	Alpha-BHC	2	2.19	UGL	109.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Alpha-BHC	2	2.14	UGL	107.0	(70-130)
LCS1	alpha-Chlordane	2	2.09	UGL	104.5	(70-130)
LCS2	alpha-Chlordane	2	2.19	UGL	109.5	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MRLMD	alpha-Chlordane	0.05	0.060	UGL	120.0	(50-150)
MS	alpha-Chlordane	2	2.14	UGL	107.0	(70-130)
RPD_LCS	alpha-Chlordane	104.500	109.500	UGL	4.7	(0-20)
LCS1	Diazinon (Qualitative)	2	2.12	UGL	106.0	(70-130)
LCS2	Diazinon (Qualitative)	2	1.87	UGL	93.5	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	106.000	93.500	UGL	12.5	(0-20)
MS	Spiked sample	Lab # 28	06270069	NONE		(0-0)
LCS1	Acenaphthene	2	2.16	UGL	108.0	(70-130)
LCS2	Acenaphthene	2	2.11	UGL	105.5	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Acenaphthene	108.000	105.500	UGL	2.3	(0-20)
LCS1	Acenaphthylene	2	2.12	UGL	106.0	(70-130)
LCS2	Acenaphthylene	2	2.02	UGL	101.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Acenaphthylene	106.000	101.000	UGL	4.8	(0-20)
LCS1	Acetochlor	2	2.05	UGL	102.5	(70-130)
LCS2	Acetochlor	2	2.07	UGL	103.5	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Acetochlor	102.500	103.500	UGL	1.0	(0-20)
LCS1	Alachlor	2	2.00	UGL	100.0	(70-130)
LCS2	Alachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLMD	Alachlor	0.05	0.050	UGL	100.0	(50-150)
MS	Alachlor	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Alachlor	100.000	101.000	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.86	UGL	93.0	(70-130)
LCS2	Aldrin	2	1.95	UGL	97.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Aldrin	ND	<0.05	UGL		
MRLMD	Aldrin	0.05	0.050	UGL	100.0	(50-150)
MS	Aldrin	2	1.91	UGL	95.5	(70-130)
RPD_LCS	Aldrin	93.000	97.500	UGL	4.7	(0-20)
LCS1	Anthracene	2	2.07	UGL	103.5	(70-130)
LCS2	Anthracene	2	0.83	UGL	41.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLMD	Anthracene	0.05	0.040	UGL	80.0	(50-150)
MS	Anthracene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Anthracene	103.500	41.500	UGL	85.5	(0-20)
LCS1	Atrazine	2	2.37	UGL	118.5	(70-130)
LCS2	Atrazine	2	2.16	UGL	108.0	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MRLMD	Atrazine	0.05	0.050	UGL	100.0	(50-150)
MS	Atrazine	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Atrazine	118.500	108.000	UGL	9.3	(0-20)
LCS1	Benz(a)Anthracene	2	1.92	UGL	96.0	(70-130)
LCS2	Benz(a)Anthracene	2	1.73	UGL	86.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLMD	Benz(a)Anthracene	0.05	0.050	UGL	100.0	(50-150)
MS	Benz(a)Anthracene	2	1.90	UGL	95.0	(70-130)
RPD_LCS	Benz(a)Anthracene	96.000	86.500	UGL	10.4	(0-20)
LCS1	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
LCS2	Benzo(a)pyrene	2	1.53	UGL	76.5	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLMD	Benzo(a)pyrene	0.05	0.040	UGL	80.0	(50-150)
MS	Benzo(a)pyrene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Benzo(a)pyrene	103.500	76.500	UGL	30.0	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Benzo(b)Fluoranthene	2	1.99	UGL	99.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLMD	Benzo(b)Fluoranthene	0.05	0.050	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	106.500	99.500	UGL	6.8	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.75	UGL	87.5	(70-130)

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MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLMD	Benzo(g,h,i)Perylene	0.05	0.050	UGL	100.0	(50-150)
MS	Benzo(g,h,i)Perylene	2	1.90	UGL	95.0	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	97.000	87.500	UGL	10.3	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	2.03	UGL	101.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLMD	Benzo(k)Fluoranthene	0.05	0.040	UGL	80.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	106.500	101.500	UGL	4.8	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.90	UGL	95.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	95.000	98.000	UGL	3.1	(0-20)
LCS1	Beta-BHC	2	2.40	UGL	120.0	(70-130)
LCS2	Beta-BHC	2	2.19	UGL	109.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.14	UGL	107.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.27	UGL	113.5	(70-130)
LCS2	Butylbenzylphthalate	2	2.27	UGL	113.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Butylbenzylphthalate	113.500	113.500	UGL	0.0	(0-20)
LCS1	Bromacil	2	2.33	UGL	116.5	(70-130)
LCS2	Bromacil	2	2.21	UGL	110.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.28	UGL	114.0	(70-130)
RPD_LCS	Bromacil	116.500	110.500	UGL	5.3	(0-20)
LCS1	Butachlor	2	2.30	UGL	115.0	(70-130)
LCS2	Butachlor	2	2.31	UGL	115.5	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLMD	Butachlor	0.05	0.050	UGL	100.0	(50-150)
MS	Butachlor	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Butachlor	115.000	115.500	UGL	0.4	(0-20)
LCS1	Caffeine by method 525mod	2	1.46	UGL	73.0	(45-137)

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LCS2	Caffeine by method 525mod	2	1.19	UGL	59.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MRLMD	Caffeine by method 525mod	0.05	0.040	UGL	80.0	(50-150)
MS	Caffeine by method 525mod	2	1.34	UGL	67.0	(46-144)
RPD_LCS	Caffeine by method 525mod	73.000	59.500	UGL	20.4	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.17	UGL	108.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.11	UGL	105.5	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MS	Chlorothalonil(Draconil,Bravo)	2	2.16	UGL	108.0	(70-130)
LCS1	Chrysene	2	2.21	UGL	110.5	(70-130)
LCS2	Chrysene	2	2.08	UGL	104.0	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLMD	Chrysene	0.05	0.050	UGL	100.0	(50-150)
MS	Chrysene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chrysene	110.500	104.000	UGL	6.1	(0-20)
LCS1	Chlorobenzilate	2	2.21	UGL	110.5	(70-130)
LCS2	Chlorobenzilate	2	2.19	UGL	109.5	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Chlorobenzilate	110.500	109.500	UGL	0.9	(0-20)
LCS1	Chloroneb	2	2.25	UGL	112.5	(70-130)
LCS2	Chloroneb	2	2.09	UGL	104.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chloroneb	112.500	104.500	UGL	7.4	(0-20)
LCS1	Delta-BHC	2	2.15	UGL	107.5	(70-130)
LCS2	Delta-BHC	2	2.06	UGL	103.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.17	UGL	108.5	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	1.90	UGL	95.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	1.67	UGL	83.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLMD	Dibenz(a,h)Anthracene	0.05	0.040	UGL	80.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	1.90	UGL	95.0	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	95.000	83.500	UGL	12.9	(0-20)
LCS1	4,4'-DDD	2	2.07	UGL	103.5	(70-130)

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LCS2	4,4'-DDD	2	2.11	UGL	105.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.11	UGL	105.5	(70-130)
RPD_LCS	4,4'-DDD	103.500	105.500	UGL	1.9	(0-20)
LCS1	4,4'-DDE	2	1.94	UGL	97.0	(70-130)
LCS2	4,4'-DDE	2	1.92	UGL	96.0	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.97	UGL	98.5	(70-130)
RPD_LCS	4,4'-DDE	97.000	96.000	UGL	1.0	(0-20)
LCS1	4,4'-DDT	2	1.96	UGL	98.0	(70-130)
LCS2	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	2.13	UGL	106.5	(70-130)
RPD_LCS	4,4'-DDT	98.000	102.000	UGL	4.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.34	UGL	117.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.08	UGL	104.0	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLMD	Dichlorvos (DDVP)	0.05	0.050	UGL	100.0	(50-150)
MS	Dichlorvos (DDVP)	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	117.000	104.000	UGL	11.8	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	1.85	UGL	92.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	2.12	UGL	106.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	92.500	106.000	UGL	13.6	(0-20)
LCS1	Diethylphthalate	2	2.38	UGL	119.0	(70-130)
LCS2	Diethylphthalate	2	2.19	UGL	109.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Diethylphthalate	119.000	109.500	UGL	8.3	(0-20)
LCS1	Dieldrin	2	2.16	UGL	108.0	(70-130)
LCS2	Dieldrin	2	2.19	UGL	109.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Dieldrin	108.000	109.500	UGL	1.4	(0-20)
LCS1	Dimethylphthalate	2	2.37	UGL	118.5	(70-130)

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Locus Technologies
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LCS2	Dimethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Dimethylphthalate	118.500	106.500	UGL	10.7	(0-20)
LCS1	Dimethoate	2	1.39	UGL	69.5	(35-100)
LCS2	Dimethoate	2	1.05	UGL	52.5	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.07	UGL	53.5	(34-111)
RPD_LCS	Dimethoate	69.500	52.500	UGL	27.9	(0-20)
LCS1	Di-n-Butylphthalate	4	4.70	UGL	117.5	(70-130)
LCS2	Di-n-Butylphthalate	4	4.64	UGL	116.0	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	4.59	UGL	114.8	(70-130)
RPD_LCS	Di-n-Butylphthalate	117.500	116.000	UGL	1.3	(0-20)
LCS1	Di-N-octylphthalate	2	1.89	UGL	94.5	(70-130)
LCS2	Di-N-octylphthalate	2	1.84	UGL	92.0	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.500	92.000	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.08	UGL	104.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.12	UGL	106.0	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLMD	Chlorpyrifos (Dursban)	0.05	0.050	UGL	100.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	104.000	106.000	UGL	1.9	(0-20)
LCS1	Endrin Aldehyde	2	2.08	UGL	104.0	(70-130)
LCS2	Endrin Aldehyde	2	2.02	UGL	101.0	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	2.15	UGL	107.5	(70-130)
LCS1	Endrin	2	2.03	UGL	101.5	(70-130)
LCS2	Endrin	2	1.89	UGL	94.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Endrin	101.500	94.500	UGL	7.1	(0-20)
LCS1	EPTC	2	2.19	UGL	109.5	(70-130)
LCS2	EPTC	2	2.18	UGL	109.0	(70-130)

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MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.14	UGL	107.0	(70-130)
RPD_LCS	EPTC	109.500	109.000	UGL	0.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	2.17	UGL	108.5	(70-130)
LCS2	Endosulfan I (Alpha)	2	2.16	UGL	108.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	2.22	UGL	111.0	(70-130)
LCS1	Endosulfan II (Beta)	2	2.07	UGL	103.5	(70-130)
LCS2	Endosulfan II (Beta)	2	1.94	UGL	97.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	2.12	UGL	106.0	(70-130)
LCS1	Endosulfan Sulfate	2	2.21	UGL	110.5	(70-130)
LCS2	Endosulfan Sulfate	2	2.11	UGL	105.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	2.07	UGL	103.5	(70-130)
LCS1	Fluoranthene	2	2.23	UGL	111.5	(70-130)
LCS2	Fluoranthene	2	2.16	UGL	108.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Fluoranthene	111.500	108.000	UGL	3.2	(0-20)
LCS1	Fluorene	2	2.25	UGL	112.5	(70-130)
LCS2	Fluorene	2	2.08	UGL	104.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MRLMD	Fluorene	0.05	0.060	UGL	120.0	(50-150)
MS	Fluorene	2	2.02	UGL	101.0	(70-130)
RPD_LCS	Fluorene	112.500	104.000	UGL	7.9	(0-20)
LCS1	gamma-Chlordane	2	1.99	UGL	99.5	(70-130)
LCS2	gamma-Chlordane	2	2.10	UGL	105.0	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLMD	gamma-Chlordane	0.05	0.060	UGL	120.0	(50-150)
MS	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
RPD_LCS	gamma-Chlordane	99.500	105.000	UGL	5.4	(0-20)
LCS1	Hexachlorobenzene	2	2.18	UGL	109.0	(70-130)
LCS2	Hexachlorobenzene	2	2.07	UGL	103.5	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MRLMD	Hexachlorobenzene	0.15	0.16	UGL	106.7	(50-150)

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Locus Technologies
(continued)

MS	Hexachlorobenzene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Hexachlorobenzene	109.000	103.500	UGL	5.2	(0-20)
LCS1	Hexachlorocyclopentadiene	2	1.81	UGL	90.5	(70-130)
LCS2	Hexachlorocyclopentadiene	2	1.83	UGL	91.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLMD	Hexachlorocyclopentadiene	0.15	0.14	UGL	93.3	(50-150)
MS	Hexachlorocyclopentadiene	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	90.500	91.500	UGL	1.1	(0-20)
LCS1	Heptachlor	2	2.01	UGL	100.5	(70-130)
LCS2	Heptachlor	2	1.98	UGL	99.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLMD	Heptachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Heptachlor	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Heptachlor	100.500	99.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.17	UGL	108.5	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	2.08	UGL	104.0	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLMD	Heptachlor Epoxide (isomer B)	0.05	0.060	UGL	120.0	(50-150)
MS	Heptachlor Epoxide (isomer B)	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	108.500	104.000	UGL	4.2	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	1.93	UGL	96.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	1.73	UGL	86.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MRLMD	Indeno(1,2,3,c,d)Pyrene	0.05	0.040	UGL	80.0	(50-150)
MS	Indeno(1,2,3,c,d)Pyrene	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	96.500	86.500	UGL	10.9	(0-20)
LCS1	Isophorone	2	2.16	UGL	108.0	(70-130)
LCS2	Isophorone	2	2.03	UGL	101.5	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Isophorone	108.000	101.500	UGL	6.2	(0-20)
LCS1	Lindane	2	2.18	UGL	109.0	(70-130)
LCS2	Lindane	2	2.03	UGL	101.5	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLMD	Lindane	0.05	0.050	UGL	100.0	(50-150)
MS	Lindane	2	1.86	UGL	93.0	(70-130)

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RPD_LCS	Lindane	109.000	101.500	UGL	7.1	(0-20)
LCS1	Methoxychlor	2	2.45	UGL	122.5	(70-130)
LCS2	Methoxychlor	2	2.26	UGL	113.0	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.31	UGL	115.5	(70-130)
RPD_LCS	Methoxychlor	122.500	113.000	UGL	8.1	(0-20)
LCS1	Metribuzin	2	2.16	UGL	108.0	(70-130)
LCS2	Metribuzin	2	1.90	UGL	95.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLMD	Metribuzin	0.05	0.040	UGL	80.0	(50-150)
MS	Metribuzin	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Metribuzin	108.000	95.000	UGL	12.8	(0-20)
LCS1	Malathion	2	2.28	UGL	114.0	(70-130)
LCS2	Malathion	2	2.21	UGL	110.5	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Malathion	114.000	110.500	UGL	3.1	(0-20)
LCS1	Molinate	2	2.34	UGL	117.0	(70-130)
LCS2	Molinate	2	2.19	UGL	109.5	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Molinate	117.000	109.500	UGL	6.6	(0-20)
LCS1	Metolachlor	2	2.22	UGL	111.0	(70-130)
LCS2	Metolachlor	2	2.21	UGL	110.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLMD	Metolachlor	0.05	0.050	UGL	100.0	(50-150)
MS	Metolachlor	2	2.23	UGL	111.5	(70-130)
RPD_LCS	Metolachlor	111.000	110.500	UGL	0.5	(0-20)
LCS1	Naphthalene	2	1.89	UGL	94.5	(70-130)
LCS2	Naphthalene	2	2.02	UGL	101.0	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MS	Naphthalene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Naphthalene	94.500	101.000	UGL	6.6	(0-20)
LCS1	trans-Nonachlor	2	2.07	UGL	103.5	(70-130)
LCS2	trans-Nonachlor	2	2.03	UGL	101.5	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		

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MRLMD	trans-Nonachlor	0.05	0.050	UGL	100.0	(50-150)
MS	trans-Nonachlor	2	1.98	UGL	99.0	(70-130)
RPD_LCS	trans-Nonachlor	103.500	101.500	UGL	2.0	(0-20)
LCS1	Pentachlorophenol	8	9.75	UGL	121.9	(70-130)
LCS2	Pentachlorophenol	8	9.49	UGL	118.6	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	9.34	UGL	116.8	(70-130)
RPD_LCS	Pentachlorophenol	121.875	118.625	UGL	2.7	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.19	UGL	104.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	4.24	UGL	106.0	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	4.54	UGL	113.5	(70-130)
RPD_LCS	Permethrin (mixed isomers)	104.750	106.000	UGL	1.2	(0-20)
LCS1	Phenanthrene	2	2.10	UGL	105.0	(70-130)
LCS2	Phenanthrene	2	2.03	UGL	101.5	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLMD	Phenanthrene	0.05	0.050	UGL	100.0	(50-150)
MS	Phenanthrene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Phenanthrene	105.000	101.500	UGL	3.4	(0-20)
LCS1	Propachlor	2	2.15	UGL	107.5	(70-130)
LCS2	Propachlor	2	1.96	UGL	98.0	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLMD	Propachlor	0.05	0.080	UGL	160.0	(50-150)
MS	Propachlor	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Propachlor	107.500	98.000	UGL	9.2	(0-20)
LCS1	Parathion	2	2.28	UGL	114.0	(70-130)
LCS2	Parathion	2	2.22	UGL	111.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Parathion	114.000	111.000	UGL	2.7	(0-20)
LCS1	Pyrene	2	2.18	UGL	109.0	(70-130)
LCS2	Pyrene	2	2.07	UGL	103.5	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MRLMD	Pyrene	0.05	0.050	UGL	100.0	(50-150)
MS	Pyrene	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Pyrene	109.000	103.500	UGL	5.2	(0-20)

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LCS1	Simazine	2	2.16	UGL	108.0	(70-130)
LCS2	Simazine	2	2.00	UGL	100.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MRLMD	Simazine	0.05	0.040	UGL	80.0	(50-150)
MS	Simazine	2	1.85	UGL	92.5	(70-130)
RPD_LCS	Simazine	108.000	100.000	UGL	7.7	(0-20)
LCS1	Perylene-d12	100	89	%R	89.0	(70-130)
LCS2	Perylene-d12	100	85	%R	85.0	(70-130)
MBLK	Perylene-d12	100	70	%R	70.0	
MRLMD	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	86	%R	86.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	90	%R	90.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	100	%R	100.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLMD	1,3-dimethyl-2-nitrobenzene	100	100	%R	100.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	101	%R	101.0	(70-130)
LCS2	Triphenylphosphate	100	108	%R	108.0	(70-130)
MBLK	Triphenylphosphate	100	97	%R	97.0	
MRLMD	Triphenylphosphate	100	99	%R	99.0	(70-130)
MS	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS1	Thiobencarb (ELAP Cert)	2	2.30	UGL	115.0	(70-130)
LCS2	Thiobencarb (ELAP Cert)	2	2.22	UGL	111.0	(70-130)
MBLK	Thiobencarb (ELAP Cert)	ND	<0.2	UGL		
MS	Thiobencarb (ELAP Cert)	2	2.19	UGL	109.5	(70-130)
RPD_LCS	Thiobencarb (ELAP Cert)	115.000	111.000	UGL	3.5	(0-20)
LCS1	Terbacil	2	2.15	UGL	107.5	(70-130)
LCS2	Terbacil	2	1.95	UGL	97.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Terbacil	107.500	97.500	UGL	9.8	(0-20)
LCS1	Trifluralin	2	2.35	UGL	117.5	(70-130)
LCS2	Trifluralin	2	2.20	UGL	110.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	117.500	110.000	UGL	6.6	(0-20)

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QC Ref #438717 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	2.02	UGL	101.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.98	UGL	99.0	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,4-Dinitrotoluene	0.1	0.070	UGL	70.0	(50-150)	
MS	2,4-Dinitrotoluene	2	3.48	UGL	174.0	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	101.000	99.000	UGL	2.0	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.92	UGL	96.0	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,6-Dinitrotoluene	0.1	0.080	UGL	80.0	(50-150)	
MS	2,6-Dinitrotoluene	2	3.95	UGL	197.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	96.000	95.000	UGL	1.0	(0-20)	
LCS1	Alpha-BHC	2	2.25	UGL	112.5	(70-130)	
LCS2	Alpha-BHC	2	2.21	UGL	110.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			
MRLHI	Alpha-BHC	0.1	0.11	UGL	110.0	(50-150)	
MS	Alpha-BHC	2	4.80	UGL	240.0	(70-130)	
LCS1	alpha-Chlordane	2	2.18	UGL	109.0	(70-130)	
LCS2	alpha-Chlordane	2	2.12	UGL	106.0	(70-130)	
MBLK	alpha-Chlordane	ND	<0.05	UGL			
MRLHI	alpha-Chlordane	0.1	0.11	UGL	110.0	(50-150)	
MS	alpha-Chlordane	2	2.27	UGL	113.5	(70-130)	
RPD_LCS	alpha-Chlordane	109.000	106.000	UGL	2.8	(0-20)	
LCS1	Diazinon (Qualitative)	2	2.13	UGL	106.5	(70-130)	
LCS2	Diazinon (Qualitative)	2	2.10	UGL	105.0	(70-130)	
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL			
MRLHI	Diazinon (Qualitative)	0.1	0.10	UGL	100.0	(50-150)	
MS	Diazinon (Qualitative)	2	2.06	UGL	103.0	(70-130)	
RPD_LCS	Diazinon (Qualitative)	106.500	105.000	UGL	1.4	(0-20)	
MS	Spiked sample	Lab # 28	07010146	NONE		(0-0)	
LCS1	Acenaphthene	2	2.17	UGL	108.5	(70-130)	

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LCS2	Acenaphthene	2	2.17	UGL	108.5	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MRLHI	Acenaphthene	0.1	0.10	UGL	100.0	(50-150)
MS	Acenaphthene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Acenaphthene	108.500	108.500	UGL	0.0	(0-20)
LCS1	Acenaphthylene	2	2.17	UGL	108.5	(70-130)
LCS2	Acenaphthylene	2	2.15	UGL	107.5	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MRLHI	Acenaphthylene	0.1	0.090	UGL	90.0	(50-150)
MS	Acenaphthylene	2	2.21	UGL	110.5	(70-130)
RPD_LCS	Acenaphthylene	108.500	107.500	UGL	0.9	(0-20)
LCS1	Acetochlor	2	2.16	UGL	108.0	(70-130)
LCS2	Acetochlor	2	2.14	UGL	107.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MRLHI	Acetochlor	0.1	0.11	UGL	110.0	(50-150)
MS	Acetochlor	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Acetochlor	108.000	107.000	UGL	0.9	(0-20)
LCS1	Alachlor	2	2.13	UGL	106.5	(70-130)
LCS2	Alachlor	2	2.15	UGL	107.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLHI	Alachlor	0.1	0.12	UGL	120.0	(50-150)
MS	Alachlor	2	1.74	UGL	87.0	(70-130)
RPD_LCS	Alachlor	106.500	107.500	UGL	0.9	(0-20)
LCS1	Aldrin	2	2.00	UGL	100.0	(70-130)
LCS2	Aldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MRLHI	Aldrin	0.1	0.10	UGL	100.0	(50-150)
MS	Aldrin	2	0.00	UGL	0.0	(70-130)
RPD_LCS	Aldrin	100.000	100.500	UGL	0.5	(0-20)
LCS1	Anthracene	2	2.11	UGL	105.5	(70-130)
LCS2	Anthracene	2	2.08	UGL	104.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLHI	Anthracene	0.1	0.050	UGL	50.0	(50-150)
MS	Anthracene	2	1.09	UGL	54.5	(70-130)
RPD_LCS	Anthracene	105.500	104.000	UGL	1.4	(0-20)
LCS1	Atrazine	2	2.29	UGL	114.5	(70-130)

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LCS2	Atrazine	2	2.22	UGL	111.0	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MRLHI	Atrazine	0.1	0.10	UGL	100.0	(50-150)
MS	Atrazine	2	2.71	UGL	135.5	(70-130)
RPD_LCS	Atrazine	114.500	111.000	UGL	3.1	(0-20)
LCS1	Benz(a)Anthracene	2	2.02	UGL	101.0	(70-130)
LCS2	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLHI	Benz(a)Anthracene	0.1	0.090	UGL	90.0	(50-150)
MS	Benz(a)Anthracene	2	1.35	UGL	67.5	(70-130)
RPD_LCS	Benz(a)Anthracene	101.000	102.000	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.19	UGL	109.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.11	UGL	105.5	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLHI	Benzo(a)pyrene	0.1	0.050	UGL	50.0	(50-150)
MS	Benzo(a)pyrene	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Benzo(a)pyrene	109.500	105.500	UGL	3.7	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.19	UGL	109.5	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.08	UGL	104.0	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(b)Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.28	UGL	114.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	109.500	104.000	UGL	5.2	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	2.05	UGL	102.5	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLHI	Benzo(g,h,i)Perylene	0.1	0.090	UGL	90.0	(50-150)
MS	Benzo(g,h,i)Perylene	2	1.75	UGL	87.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	107.000	102.500	UGL	4.3	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.15	UGL	107.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	2.13	UGL	106.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(k)Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	1.80	UGL	90.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	107.500	106.500	UGL	0.9	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	2.02	UGL	101.0	(70-130)

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LCS2	Di(2-Ethylhexyl)phthalate	2	1.93	UGL	96.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MRLHI	Di(2-Ethylhexyl)phthalate	0.3	0.41	UGL	136.7	(50-150)
MS	Di(2-Ethylhexyl)phthalate	2	4.33	UGL	216.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	101.000	96.500	UGL	4.6	(0-20)
LCS1	Beta-BHC	2	2.26	UGL	113.0	(70-130)
LCS2	Beta-BHC	2	2.25	UGL	112.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MRLHI	Beta-BHC	0.1	0.11	UGL	110.0	(50-150)
MS	Beta-BHC	2	3.87	UGL	193.5	(70-130)
LCS1	Butylbenzylphthalate	2	2.37	UGL	118.5	(70-130)
LCS2	Butylbenzylphthalate	2	2.32	UGL	116.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MRLHI	Butylbenzylphthalate	0.3	0.29	UGL	96.7	(50-150)
MS	Butylbenzylphthalate	2	4.23	UGL	211.5	(70-130)
RPD_LCS	Butylbenzylphthalate	118.500	116.000	UGL	2.1	(0-20)
LCS1	Bromacil	2	2.46	UGL	123.0	(70-130)
LCS2	Bromacil	2	2.35	UGL	117.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MRLHI	Bromacil	0.1	0.070	UGL	70.0	(50-150)
MS	Bromacil	2	2.96	UGL	148.0	(70-130)
RPD_LCS	Bromacil	123.000	117.500	UGL	4.6	(0-20)
LCS1	Butachlor	2	2.46	UGL	123.0	(70-130)
LCS2	Butachlor	2	2.39	UGL	119.5	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLHI	Butachlor	0.1	0.11	UGL	110.0	(50-150)
MS	Butachlor	2	3.18	UGL	159.0	(70-130)
RPD_LCS	Butachlor	123.000	119.500	UGL	2.9	(0-20)
LCS1	Caffeine by method 525mod	2	1.67	UGL	83.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.64	UGL	82.0	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MRLHI	Caffeine by method 525mod	0.1	0.070	UGL	70.0	(50-150)
MS	Caffeine by method 525mod	2	5.41	UGL	270.5	(46-144)
RPD_LCS	Caffeine by method 525mod	83.500	82.000	UGL	1.8	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.19	UGL	109.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.21	UGL	110.5	(70-130)

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MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MRLHI	Chlorothalonil(Draconil,Bravo)	0.1	0.10	UGL	100.0	(50-150)
MS	Chlorothalonil(Draconil,Bravo)	2	2.26	UGL	113.0	(70-130)
LCS1	Chrysene	2	2.20	UGL	110.0	(70-130)
LCS2	Chrysene	2	2.10	UGL	105.0	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLHI	Chrysene	0.1	0.10	UGL	100.0	(50-150)
MS	Chrysene	2	2.74	UGL	137.0	(70-130)
RPD_LCS	Chrysene	110.000	105.000	UGL	4.7	(0-20)
LCS1	Chlorobenzilate	2	2.30	UGL	115.0	(70-130)
LCS2	Chlorobenzilate	2	2.24	UGL	112.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MRLHI	Chlorobenzilate	0.1	0.070	UGL	70.0	(50-150)
MS	Chlorobenzilate	2	1.90	UGL	95.0	(70-130)
RPD_LCS	Chlorobenzilate	115.000	112.000	UGL	2.6	(0-20)
LCS1	Chloroneb	2	2.12	UGL	106.0	(70-130)
LCS2	Chloroneb	2	2.18	UGL	109.0	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MRLHI	Chloroneb	0.1	0.10	UGL	100.0	(50-150)
MS	Chloroneb	2	2.80	UGL	140.0	(70-130)
RPD_LCS	Chloroneb	106.000	109.000	UGL	2.8	(0-20)
LCS1	Delta-BHC	2	2.18	UGL	109.0	(70-130)
LCS2	Delta-BHC	2	2.15	UGL	107.5	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MRLHI	Delta-BHC	0.1	0.11	UGL	110.0	(50-150)
MS	Delta-BHC	2	3.02	UGL	151.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.04	UGL	102.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	1.99	UGL	99.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLHI	Dibenz(a,h)Anthracene	0.1	0.090	UGL	90.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	1.52	UGL	76.0	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	102.000	99.500	UGL	2.5	(0-20)
LCS1	4,4'-DDD	2	2.15	UGL	107.5	(70-130)
LCS2	4,4'-DDD	2	2.12	UGL	106.0	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MRLHI	4,4'-DDD	0.1	0.12	UGL	120.0	(50-150)

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MS	4,4'-DDD	2	1.83	UGL	91.5	(70-130)
RPD_LCS	4,4'-DDD	107.500	106.000	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.97	UGL	98.5	(70-130)
LCS2	4,4'-DDE	2	1.97	UGL	98.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MRLHI	4,4'-DDE	0.1	0.11	UGL	110.0	(50-150)
MS	4,4'-DDE	2	2.18	UGL	109.0	(70-130)
RPD_LCS	4,4'-DDE	98.500	98.500	UGL	0.0	(0-20)
LCS1	4,4'-DDT	2	2.08	UGL	104.0	(70-130)
LCS2	4,4'-DDT	2	2.16	UGL	108.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MRLHI	4,4'-DDT	0.1	0.090	UGL	90.0	(50-150)
MS	4,4'-DDT	2	1.20	UGL	60.0	(70-130)
RPD_LCS	4,4'-DDT	104.000	108.000	UGL	3.8	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.18	UGL	109.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.15	UGL	107.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLHI	Dichlorvos (DDVP)	0.1	0.11	UGL	110.0	(50-150)
MS	Dichlorvos (DDVP)	2	3.73	UGL	186.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	109.000	107.500	UGL	1.4	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.07	UGL	103.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	2.08	UGL	104.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MRLHI	Di-(2-Ethylhexyl)adipate	0.3	0.29	UGL	96.7	(50-150)
MS	Di-(2-Ethylhexyl)adipate	2	1.34	UGL	67.0	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.500	104.000	UGL	0.5	(0-20)
LCS1	Diethylphthalate	2	2.20	UGL	110.0	(70-130)
LCS2	Diethylphthalate	2	2.19	UGL	109.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MRLHI	Diethylphthalate	0.3	0.31	UGL	103.3	(50-150)
MS	Diethylphthalate	2	4.31	UGL	215.5	(70-130)
RPD_LCS	Diethylphthalate	110.000	109.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.29	UGL	114.5	(70-130)
LCS2	Dieldrin	2	2.30	UGL	115.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MRLHI	Dieldrin	0.1	0.11	UGL	110.0	(50-150)

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MS	Dieldrin	2	8.63	UGL	431.5	(70-130)
RPD_LCS	Dieldrin	114.500	115.000	UGL	0.4	(0-20)
LCS1	Dimethylphthalate	2	2.21	UGL	110.5	(70-130)
LCS2	Dimethylphthalate	2	2.17	UGL	108.5	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MRLHI	Dimethylphthalate	0.3	0.32	UGL	106.7	(50-150)
MS	Dimethylphthalate	2	4.04	UGL	202.0	(70-130)
RPD_LCS	Dimethylphthalate	110.500	108.500	UGL	1.8	(0-20)
LCS1	Dimethoate	2	1.48	UGL	74.0	(35-100)
LCS2	Dimethoate	2	1.40	UGL	70.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MRLHI	Dimethoate	0.1	0.060	UGL	60.0	(50-150)
MS	Dimethoate	2	5.70	UGL	285.0	(34-111)
RPD_LCS	Dimethoate	74.000	70.000	UGL	5.6	(0-20)
LCS1	Di-n-Butylphthalate	4	4.84	UGL	121.0	(70-130)
LCS2	Di-n-Butylphthalate	4	4.81	UGL	120.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MRLHI	Di-n-Butylphthalate	0.3	0.45	UGL	150.0	(50-150)
MS	Di-n-Butylphthalate	4	11.06	UGL	276.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	121.000	120.250	UGL	0.6	(0-20)
LCS1	Di-N-octylphthalate	2	2.04	UGL	102.0	(70-130)
LCS2	Di-N-octylphthalate	2	2.02	UGL	101.0	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MRLHI	Di-N-octylphthalate	0.1	0.070	UGL	70.0	(50-150)
MS	Di-N-octylphthalate	2	1.40	UGL	70.0	(70-130)
RPD_LCS	Di-N-octylphthalate	102.000	101.000	UGL	1.0	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.24	UGL	112.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.15	UGL	107.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLHI	Chlorpyrifos (Dursban)	0.1	0.10	UGL	100.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.69	UGL	134.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	112.000	107.500	UGL	4.1	(0-20)
LCS1	Endrin Aldehyde	2	2.21	UGL	110.5	(70-130)
LCS2	Endrin Aldehyde	2	2.18	UGL	109.0	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MRLHI	Endrin Aldehyde	0.1	0.10	UGL	100.0	(50-150)

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MS	Endrin Aldehyde	2	5.29	UGL	264.5	(70-130)
LCS1	Endrin	2	2.24	UGL	112.0	(70-130)
LCS2	Endrin	2	2.03	UGL	101.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MRLHI	Endrin	0.1	0.14	UGL	140.0	(50-150)
MS	Endrin	2	2.47	UGL	123.5	(70-130)
RPD_LCS	Endrin	112.000	101.500	UGL	9.8	(0-20)
LCS1	EPTC	2	2.11	UGL	105.5	(70-130)
LCS2	EPTC	2	2.15	UGL	107.5	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MRLHI	EPTC	0.1	0.12	UGL	120.0	(50-150)
MS	EPTC	2	3.11	UGL	155.5	(70-130)
RPD_LCS	EPTC	105.500	107.500	UGL	1.9	(0-20)
LCS1	Endosulfan I (Alpha)	2	2.09	UGL	104.5	(70-130)
LCS2	Endosulfan I (Alpha)	2	2.06	UGL	103.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MRLHI	Endosulfan I (Alpha)	0.1	0.11	UGL	110.0	(50-150)
MS	Endosulfan I (Alpha)	2	4.39	UGL	219.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.24	UGL	112.0	(70-130)
LCS2	Endosulfan II (Beta)	2	2.07	UGL	103.5	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MRLHI	Endosulfan II (Beta)	0.1	0.15	UGL	150.0	(50-150)
MS	Endosulfan II (Beta)	2	3.77	UGL	188.5	(70-130)
LCS1	Endosulfan Sulfate	2	2.23	UGL	111.5	(70-130)
LCS2	Endosulfan Sulfate	2	2.30	UGL	115.0	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MRLHI	Endosulfan Sulfate	0.1	0.11	UGL	110.0	(50-150)
MS	Endosulfan Sulfate	2	2.27	UGL	113.5	(70-130)
LCS1	Fluoranthene	2	2.28	UGL	114.0	(70-130)
LCS2	Fluoranthene	2	2.28	UGL	114.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MRLHI	Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Fluoranthene	2	2.02	UGL	101.0	(70-130)
RPD_LCS	Fluoranthene	114.000	114.000	UGL	0.0	(0-20)
LCS1	Fluorene	2	2.17	UGL	108.5	(70-130)
LCS2	Fluorene	2	2.15	UGL	107.5	(70-130)

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MBLK	Fluorene	ND	<0.05	UGL		
MRLHI	Fluorene	0.1	0.11	UGL	110.0	(50-150)
MS	Fluorene	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Fluorene	108.500	107.500	UGL	0.9	(0-20)
LCS1	gamma-Chlordane	2	2.08	UGL	104.0	(70-130)
LCS2	gamma-Chlordane	2	2.15	UGL	107.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLHI	gamma-Chlordane	0.1	0.10	UGL	100.0	(50-150)
MS	gamma-Chlordane	2	2.35	UGL	117.5	(70-130)
RPD_LCS	gamma-Chlordane	104.000	107.500	UGL	3.3	(0-20)
LCS1	Hexachlorobenzene	2	2.16	UGL	108.0	(70-130)
LCS2	Hexachlorobenzene	2	2.14	UGL	107.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MRLHI	Hexachlorobenzene	0.3	0.32	UGL	106.7	(50-150)
MS	Hexachlorobenzene	2	0.99	UGL	49.5	(70-130)
RPD_LCS	Hexachlorobenzene	108.000	107.000	UGL	0.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.10	UGL	105.0	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLHI	Hexachlorocyclopentadiene	0.3	0.32	UGL	106.7	(50-150)
MS	Hexachlorocyclopentadiene	2	1.08	UGL	54.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	108.500	105.000	UGL	3.3	(0-20)
LCS1	Heptachlor	2	2.07	UGL	103.5	(70-130)
LCS2	Heptachlor	2	2.00	UGL	100.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLHI	Heptachlor	0.1	0.10	UGL	100.0	(50-150)
MS	Heptachlor	2	1.03	UGL	51.5	(70-130)
RPD_LCS	Heptachlor	103.500	100.000	UGL	3.4	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.25	UGL	112.5	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	2.24	UGL	112.0	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLHI	Heptachlor Epoxide (isomer B)	0.1	0.10	UGL	100.0	(50-150)
MS	Heptachlor Epoxide (isomer B)	2	2.27	UGL	113.5	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	112.500	112.000	UGL	0.4	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.05	UGL	102.5	(70-130)

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MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MRLHI	Indeno(1,2,3,c,d)Pyrene	0.1	0.090	UGL	90.0	(50-150)
MS	Indeno(1,2,3,c,d)Pyrene	2	0.85	UGL	42.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	104.500	102.500	UGL	1.9	(0-20)
LCS1	Isophorone	2	2.11	UGL	105.5	(70-130)
LCS2	Isophorone	2	2.09	UGL	104.5	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MRLHI	Isophorone	0.1	0.12	UGL	120.0	(50-150)
MS	Isophorone	2	3.60	UGL	180.0	(70-130)
RPD_LCS	Isophorone	105.500	104.500	UGL	1.0	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.05	UGL	102.5	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLHI	Lindane	0.1	0.080	UGL	80.0	(50-150)
MS	Lindane	2	4.31	UGL	215.5	(70-130)
RPD_LCS	Lindane	100.500	102.500	UGL	2.0	(0-20)
LCS1	Methoxychlor	2	2.45	UGL	122.5	(70-130)
LCS2	Methoxychlor	2	2.37	UGL	118.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MRLHI	Methoxychlor	0.1	0.080	UGL	80.0	(50-150)
MS	Methoxychlor	2	3.96	UGL	198.0	(70-130)
RPD_LCS	Methoxychlor	122.500	118.500	UGL	3.3	(0-20)
LCS1	Metribuzin	2	2.22	UGL	111.0	(70-130)
LCS2	Metribuzin	2	2.15	UGL	107.5	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLHI	Metribuzin	0.1	0.10	UGL	100.0	(50-150)
MS	Metribuzin	2	3.32	UGL	166.0	(70-130)
RPD_LCS	Metribuzin	111.000	107.500	UGL	3.2	(0-20)
LCS1	Malathion	2	2.42	UGL	121.0	(70-130)
LCS2	Malathion	2	2.44	UGL	122.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MRLHI	Malathion	0.1	0.11	UGL	110.0	(50-150)
MS	Malathion	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Malathion	121.000	122.000	UGL	0.8	(0-20)
LCS1	Molinate	2	2.21	UGL	110.5	(70-130)
LCS2	Molinate	2	2.22	UGL	111.0	(70-130)

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MBLK	Molinate	ND	<0.1	UGL		
MRLHI	Molinate	0.1	0.11	UGL	110.0	(50-150)
MS	Molinate	2	3.17	UGL	158.5	(70-130)
RPD_LCS	Molinate	110.500	111.000	UGL	0.5	(0-20)
LCS1	Metolachlor	2	2.30	UGL	115.0	(70-130)
LCS2	Metolachlor	2	2.29	UGL	114.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLHI	Metolachlor	0.1	0.11	UGL	110.0	(50-150)
MS	Metolachlor	2	2.29	UGL	114.5	(70-130)
RPD_LCS	Metolachlor	115.000	114.500	UGL	0.4	(0-20)
LCS1	Naphthalene	2	2.10	UGL	105.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MRLHI	Naphthalene	0.1	0.10	UGL	100.0	(50-150)
MS	Naphthalene	2	2.49	UGL	124.5	(70-130)
RPD_LCS	Naphthalene	105.000	103.500	UGL	1.4	(0-20)
LCS1	trans-Nonachlor	2	2.08	UGL	104.0	(70-130)
LCS2	trans-Nonachlor	2	2.13	UGL	106.5	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MRLHI	trans-Nonachlor	0.1	0.11	UGL	110.0	(50-150)
MS	trans-Nonachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	trans-Nonachlor	104.000	106.500	UGL	2.4	(0-20)
LCS1	Pentachlorophenol	8	6.48	UGL	81.0	(70-130)
LCS2	Pentachlorophenol	8	5.94	UGL	74.2	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MRLHI	Pentachlorophenol	1.2	1.14	UGL	95.0	(50-150)
MS	Pentachlorophenol	8	0.00	UGL	0.0	(70-130)
RPD_LCS	Pentachlorophenol	81.000	74.250	UGL	8.7	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.40	UGL	110.0	(70-130)
LCS2	Permethrin (mixed isomers)	4	4.30	UGL	107.5	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MRLHI	Permethrin (mixed isomers)	0.2	0.14	UGL	70.0	(50-150)
MS	Permethrin (mixed isomers)	4	4.24	UGL	106.0	(70-130)
RPD_LCS	Permethrin (mixed isomers)	110.000	107.500	UGL	2.3	(0-20)
LCS1	Phenanthrene	2	2.11	UGL	105.5	(70-130)
LCS2	Phenanthrene	2	2.09	UGL	104.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Phenanthrene	ND	<0.04	UGL		
MRLHI	Phenanthrene	0.1	0.10	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.91	UGL	95.5	(70-130)
RPD_LCS	Phenanthrene	105.500	104.500	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.06	UGL	103.0	(70-130)
LCS2	Propachlor	2	1.98	UGL	99.0	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLHI	Propachlor	0.1	0.12	UGL	120.0	(50-150)
MS	Propachlor	2	3.89	UGL	194.5	(70-130)
RPD_LCS	Propachlor	103.000	99.000	UGL	4.0	(0-20)
LCS1	Parathion	2	2.40	UGL	120.0	(70-130)
LCS2	Parathion	2	2.39	UGL	119.5	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MRLHI	Parathion	0.1	0.090	UGL	90.0	(50-150)
MS	Parathion	2	2.81	UGL	140.5	(70-130)
RPD_LCS	Parathion	120.000	119.500	UGL	0.4	(0-20)
LCS1	Pyrene	2	2.21	UGL	110.5	(70-130)
LCS2	Pyrene	2	2.23	UGL	111.5	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MRLHI	Pyrene	0.1	0.10	UGL	100.0	(50-150)
MS	Pyrene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Pyrene	110.500	111.500	UGL	0.9	(0-20)
LCS1	Simazine	2	2.15	UGL	107.5	(70-130)
LCS2	Simazine	2	2.02	UGL	101.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MRLHI	Simazine	0.1	0.11	UGL	110.0	(50-150)
MS	Simazine	2	3.98	UGL	199.0	(70-130)
RPD_LCS	Simazine	107.500	101.000	UGL	6.2	(0-20)
LCS1	Perylene-d12	100	89	%R	89.0	(70-130)
LCS2	Perylene-d12	100	93	%R	93.0	(70-130)
MBLK	Perylene-d12	100	72	%R	72.0	
MRLHI	Perylene-d12	100	81	%R	81.0	(70-130)
MS	Perylene-d12	100	62	%R	62.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MRLHI	1,3-dimethyl-2-nitrobenzene	100	94	%R	94.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	131	%R	131.0	(70-130)
LCS1	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS2	Triphenylphosphate	100	104	%R	104.0	(70-130)
MBLK	Triphenylphosphate	100	100	%R	100.0	
MRLHI	Triphenylphosphate	100	104	%R	104.0	(70-130)
MS	Triphenylphosphate	100	111	%R	111.0	(70-130)
LCS1	Thiobencarb (ELAP Cert)	2	2.30	UGL	115.0	(70-130)
LCS2	Thiobencarb (ELAP Cert)	2	2.30	UGL	115.0	(70-130)
MBLK	Thiobencarb (ELAP Cert)	ND	<0.2	UGL		
MRLHI	Thiobencarb (ELAP Cert)	0.1	0.11	UGL	110.0	(50-150)
MS	Thiobencarb (ELAP Cert)	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Thiobencarb (ELAP Cert)	115.000	115.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.29	UGL	114.5	(70-130)
LCS2	Terbacil	2	2.26	UGL	113.0	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MRLHI	Terbacil	0.1	0.13	UGL	130.0	(50-150)
MS	Terbacil	2	2.33	UGL	116.5	(70-130)
RPD_LCS	Terbacil	114.500	113.000	UGL	1.3	(0-20)
LCS1	Trifluralin	2	2.36	UGL	118.0	(70-130)
LCS2	Trifluralin	2	2.25	UGL	112.5	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MRLHI	Trifluralin	0.1	0.090	UGL	90.0	(50-150)
MS	Trifluralin	2	2.58	UGL	129.0	(70-130)
RPD_LCS	Trifluralin	118.000	112.500	UGL	4.8	(0-20)

QC Ref #441250 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	20	24.4	NGL	122.0	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	50	53.7	NGL	107.4	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	114	NGL	114.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
LCS1	Perfluoro octanoic acid - PFOA	20	19	NGL	95.0	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	50	58.8	NGL	117.6	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS3	Perfluoro octanoic acid - PFOA	100	89	NGL	89.0	(70-130)
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL		
LCS1	Perfluoro octanesulfonate-PFOS	20	25.6	NGL	128.0	(70-130)
LCS2	Perfluoro octanesulfonate-PFOS	50	52.0	NGL	104.0	(70-130)
LCS3	Perfluoro octanesulfonate-PFOS	100	97.9	NGL	97.9	(70-130)
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL		
LCS1	Internal Standard	100	112	%R	112.0	(80-120)
LCS2	Internal Standard	100	108	%R	108.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	98	%R		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories
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Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Aug 08 2008
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA

Report#: 245539
Project: RECLAIMED
PO#: 27011-07-320

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 25 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 245539
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **06/26/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id Tests Scheduled	Matrix	Sample Date
2806260201	SCRWA1-2514N	Water	24-jun-2008 16:30:00
	@525PLUS @NDMA EDTASUB NTASUB		
2806260202	DI-1 2514P	Water	24-jun-2008 16:30:00
	@525PLUS @NDMA EDTASUB NTASUB		

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

6-26 1000

6°C ONICE
245539

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test

PROJECT NUMBER: 27011-07-3200

RECORDER ______ (SIGN)

SAMPLERS: Vector (PRINT)

Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
A. 40-ml VOA Vial B. Glass Liter C. Plastic 500-ml D. Plastic Liter E. Brass Tube F. Other 125 ml glass	A. Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment F. Oil G. Waste H. Blank/Spike I. Other ______	1. Standard 2. 48 Hour 3. 24 Hour 4. Other ______

ANALYTICAL LAB: MWH Lab

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	thio	Field Filtered (check)	525+	NDMA	EDTA	NTA						TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/24	16:30	SCRWA1-2514N				B	G			X		✓	X									1	14day					
2			SCRWA1 2514N				B	G			X			X										14 day					
3			SCRWA-1 2514N				B	G				X			X									7day					
4			SCRWA-1 2514N				F	G	X							X	X							28day					
5			DI-1 2514P				B	G			X			X										14day					
6							B	G			X			X										14day					
7							B	G				X			X									7day					
8							F	G	X							X	X							28day					
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Sampled by Vector Eng

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Susan Stewart			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier ONTrac	Ice Chest		Susan Stewart 6/25/08					

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739

☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101

☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

MWH Laboratories
A Division of MWH Americas, Inc.

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Laboratory
Hits Report
#245539

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
26-jun-2008 14:20:58

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2806260201	**SCRWA1-2514N**				
07/10/08	N-Nitroso dimethylamine (NDMA)		4.1		ng/l	2.0
07/02/08	EDTA by Ion Chrom-Subcontract		232		ug/l	100
	2806260202	**DI-1 2514P**				
07/10/08	N-Nitroso dimethylamine (NDMA)		4.0		ng/l	2.0

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

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Monrovia, California 91016-3629
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Fax: 626 386 1101
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Laboratory Data Report #245539

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
06/26/08

SCRWA1-2514N (2806260201) Sampled on 06/24/08 16:30

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/02/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	232	ug/l	100	1
	07/02/08 00:00		(EPA 300	) NTA by Ion Chrom- Subcontract	ND	ug/l	100	1

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) 2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) 2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Alpha-BHC	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) alpha-Chlordane	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Diazinon (Qualitative)	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Acenaphthene	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Acenaphthylene	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Acetochlor	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Alachlor	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Aldrin	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Anthracene	ND	ug/l	0.02	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Atrazine	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Benz(a)Anthracene	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Benzo(a)pyrene	ND	ug/l	0.02	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Beta-BHC	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Butylbenzylphthalate	ND	ug/l	0.5	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Bromacil	ND	ug/l	0.2	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Butachlor	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Caffeine by method 525mod	ND	ug/l	0.02	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Chrysene	ND	ug/l	0.02	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Chlorobenzilate	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Chloroneb	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2	) Delta-BHC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Pentachlorophenol	ND(L3)	ug/l	1.0	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Thiobencarb	ND	ug/l	0.2	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/08/08	07/15/08 20:42	438477	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	101	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	78	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	102	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/10/08 00:00	436345	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	4.1	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	81	% Rec		

DI-1 2514P (2806260202) Sampled on 06/24/08 16:30

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/02/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	07/02/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Pentachlorophenol	ND(L3)	ug/l	1.0	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Thiobencarb	ND	ug/l	0.2	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/08/08	07/15/08 21:06	438477	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	81	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	98	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	104	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/10/08 00:00	436345	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	4.0	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	78	% Rec		

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution

MWH Laboratories
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Report
Comments
#245539

Group Comments

Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2806260201)

Test: Pentachlorophenol (ML/EPA 525.2)

L3 - The associated blank spike recovery was above method acceptance limits.

(QC Ref#: 2806260202)

Test: Pentachlorophenol (ML/EPA 525.2)

L3 - The associated blank spike recovery was above method acceptance limits.

Metrohm-Peak, LLC

MWH Laboratories - Monrovia, CA
Lab Report 2008-2857 thru 2863
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 7-2-08
July 7, 2008

MP ID	**Sample**	**EDTA** **mg/L**	**NTA** **mg/L**
2857-1	2806260201 Project# 245539	0.232	< 0.100
2857-2	2806260202 Project# 245539	< 0.100	< 0.100
2858	2806270194 Project# 245680	< 0.100	< 0.100
2859	2806260179 Project# 245526	< 0.100	< 0.100
2860	2806260176 Project# 245524	< 0.100	< 0.100
2860 Dup	2806260176 Project# 245524 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
2861	2806270261 Project# 245714	< 0.100	< 0.100
2862	2806260140 Project# 245513	< 0.100	< 0.100
2863	2806270262 Project# 245715	< 0.100	< 0.100
	QC	0.509	0.488
	QC Value	0.500	0.500
	% Recovery	101.800	97.600
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

! CHECKED AUG 07 2008

Report by:

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Laboratory QC Summary #245539

Locus Technologies

QC Ref #436345 - N-Nitroso dimethylamine (NDMA) Analysis Date: 07/10/2008

2806260201	SCRWA1-2514N	Analyzed by: dlo
2806260202	DI-1 2514P	Analyzed by: dlo

QC Ref #438477 - 525 Semivolatiles by GC/MS Analysis Date: 07/15/2008

2806260201	SCRWA1-2514N	Analyzed by: jwc
2806260202	DI-1 2514P	Analyzed by: jwc

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Laboratory QC Report #245539

Locus Technologies

QC Ref #436345 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	06300037	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	1.54	NGL	77.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	1.87	NGL	93.5	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	9.89	NGL	98.9	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	9.79	NGL	97.9	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	77.000	93.500	NGL	19.4	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	98.900	97.900	NGL	1.0	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	93	%R	93.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	85	%R	85.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	81	%R	81.0		
MS	NDMA-d6(Internal Standard)	100	82	%R	82.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	94	%R	94.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	93.000	85.000	%R	9.0	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	82.000	94.000	%R	13.6	(0-20)	

QC Ref #438477 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.82	UGL	91.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.70	UGL	85.0	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.84	UGL	92.0	(70-130)	
MSD	2,4-Dinitrotoluene	2	1.82	UGL	91.0	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	91.000	85.000	UGL	6.8	(0-20)	
RPD_MS	2,4-Dinitrotoluene	92.000	91.000	UGL	1.1	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.78	UGL	89.0	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.68	UGL	84.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.81	UGL	90.5	(70-130)	
MSD	2,6-Dinitrotoluene	2	1.81	UGL	90.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	89.000	84.000	UGL	5.8	(0-20)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_MS	2,6-Dinitrotoluene	90.500	90.500	UGL	0.0	(0-20)
LCS1	Alpha-BHC	2	2.11	UGL	105.5	(70-130)
LCS2	Alpha-BHC	2	2.15	UGL	107.5	(70-130)
MBLK	Alpha-BHC	ND	<0.1	UGL		
MS	Alpha-BHC	2	2.18	UGL	109.0	(70-130)
MSD	Alpha-BHC	2	2.15	UGL	107.5	(70-130)
RPD_MS	Alpha-BHC	109.000	107.500	UGL	1.4	(0-20)
LCS1	alpha-Chlordane	2	2.24	UGL	112.0	(70-130)
LCS2	alpha-Chlordane	2	2.15	UGL	107.5	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	2.05	UGL	102.5	(70-130)
MSD	alpha-Chlordane	2	2.01	UGL	100.5	(70-130)
RPD_LCS	alpha-Chlordane	112.000	107.500	UGL	4.1	(0-20)
RPD_MS	alpha-Chlordane	102.500	100.500	UGL	2.0	(0-20)
LCS1	Diazinon (Qualitative)	2	1.97	UGL	98.5	(70-130)
LCS2	Diazinon (Qualitative)	2	2.01	UGL	100.5	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.01	UGL	100.5	(70-130)
MSD	Diazinon (Qualitative)	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	98.500	100.500	UGL	2.0	(0-20)
RPD_MS	Diazinon (Qualitative)	100.500	100.500	UGL	0.0	(0-20)
MS	Spiked sample	Lab # 28	06250239	NONE		(0-0)
LCS1	Acenaphthene	2	2.10	UGL	105.0	(70-130)
LCS2	Acenaphthene	2	2.14	UGL	107.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	2.08	UGL	104.0	(70-130)
MSD	Acenaphthene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Acenaphthene	105.000	107.000	UGL	1.9	(0-20)
RPD_MS	Acenaphthene	104.000	103.500	UGL	0.5	(0-20)
LCS1	Acenaphthylene	2	2.09	UGL	104.5	(70-130)
LCS2	Acenaphthylene	2	2.06	UGL	103.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	2.03	UGL	101.5	(70-130)
MSD	Acenaphthylene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Acenaphthylene	104.500	103.000	UGL	1.4	(0-20)
RPD_MS	Acenaphthylene	101.500	102.500	UGL	1.0	(0-20)

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LCS1	Acetochlor	2	2.05	UGL	102.5	(70-130)
LCS2	Acetochlor	2	2.05	UGL	102.5	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.04	UGL	102.0	(70-130)
MSD	Acetochlor	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Acetochlor	102.500	102.500	UGL	0.0	(0-20)
RPD_MS	Acetochlor	102.000	105.000	UGL	2.9	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.05	UGL	102.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.02	UGL	101.0	(70-130)
MSD	Alachlor	2	2.02	UGL	101.0	(70-130)
RPD_LCS	Alachlor	101.500	102.500	UGL	1.0	(0-20)
RPD_MS	Alachlor	101.000	101.000	UGL	0.0	(0-20)
LCS1	Aldrin	2	1.79	UGL	89.5	(70-130)
LCS2	Aldrin	2	1.81	UGL	90.5	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.74	UGL	87.0	(70-130)
MSD	Aldrin	2	1.76	UGL	88.0	(70-130)
RPD_LCS	Aldrin	89.500	90.500	UGL	1.1	(0-20)
RPD_MS	Aldrin	87.000	88.000	UGL	1.1	(0-20)
LCS1	Anthracene	2	2.09	UGL	104.5	(70-130)
LCS2	Anthracene	2	2.08	UGL	104.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.06	UGL	103.0	(70-130)
MSD	Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Anthracene	104.500	104.000	UGL	0.5	(0-20)
RPD_MS	Anthracene	103.000	102.000	UGL	1.0	(0-20)
LCS1	Atrazine	2	2.26	UGL	113.0	(70-130)
LCS2	Atrazine	2	2.18	UGL	109.0	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.10	UGL	105.0	(70-130)
MSD	Atrazine	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Atrazine	113.000	109.000	UGL	3.6	(0-20)
RPD_MS	Atrazine	105.000	108.000	UGL	2.8	(0-20)

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Locus Technologies
(continued)

LCS1	Benz(a)Anthracene	2	2.03	UGL	101.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.01	UGL	100.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	1.91	UGL	95.5	(70-130)
MSD	Benz(a)Anthracene	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Benz(a)Anthracene	101.500	100.500	UGL	1.0	(0-20)
RPD_MS	Benz(a)Anthracene	95.500	98.000	UGL	2.6	(0-20)
LCS1	Benzo(a)pyrene	2	1.95	UGL	97.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.00	UGL	100.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	1.96	UGL	98.0	(70-130)
MSD	Benzo(a)pyrene	2	1.91	UGL	95.5	(70-130)
RPD_LCS	Benzo(a)pyrene	97.500	100.000	UGL	2.5	(0-20)
RPD_MS	Benzo(a)pyrene	98.000	95.500	UGL	2.6	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.08	UGL	104.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.06	UGL	103.0	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.030	UGL	150.0	(50-150)
MS	Benzo(b)Fluoranthene	2	1.97	UGL	98.5	(70-130)
MSD	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	104.000	103.000	UGL	1.0	(0-20)
RPD_MS	Benzo(b)Fluoranthene	98.500	100.000	UGL	1.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.96	UGL	98.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	2.05	UGL	102.5	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	2.03	UGL	101.5	(70-130)
MSD	Benzo(g,h,i)Perylene	2	1.78	UGL	89.0	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	98.000	102.500	UGL	4.5	(0-20)
RPD_MS	Benzo(g,h,i)Perylene	101.500	89.000	UGL	13.1	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.05	UGL	102.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.12	UGL	106.0	(70-130)
MSD	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)

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RPD_LCS	Benzo(k)Fluoranthene	102.500	98.500	UGL	4.0	(0-20)
RPD_MS	Benzo(k)Fluoranthene	106.000	96.500	UGL	9.4	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.97	UGL	98.5	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.95	UGL	97.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.98	UGL	99.0	(70-130)
MSD	Di(2-Ethylhexyl)phthalate	2	1.94	UGL	97.0	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.500	97.500	UGL	1.0	(0-20)
RPD_MS	Di(2-Ethylhexyl)phthalate	99.000	97.000	UGL	2.0	(0-20)
LCS1	Beta-BHC	2	2.19	UGL	109.5	(70-130)
LCS2	Beta-BHC	2	2.21	UGL	110.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.14	UGL	107.0	(70-130)
MSD	Beta-BHC	2	2.20	UGL	110.0	(70-130)
RPD_MS	Beta-BHC	107.000	110.000	UGL	2.8	(0-20)
LCS1	Butylbenzylphthalate	2	2.24	UGL	112.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.23	UGL	111.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.17	UGL	108.5	(70-130)
MSD	Butylbenzylphthalate	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Butylbenzylphthalate	112.000	111.500	UGL	0.4	(0-20)
RPD_MS	Butylbenzylphthalate	108.500	107.500	UGL	0.9	(0-20)
LCS1	Bromacil	2	2.37	UGL	118.5	(70-130)
LCS2	Bromacil	2	2.29	UGL	114.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.27	UGL	113.5	(70-130)
MSD	Bromacil	2	2.24	UGL	112.0	(70-130)
RPD_LCS	Bromacil	118.500	114.500	UGL	3.4	(0-20)
RPD_MS	Bromacil	113.500	112.000	UGL	1.3	(0-20)
LCS1	Butachlor	2	2.28	UGL	114.0	(70-130)
LCS2	Butachlor	2	2.32	UGL	116.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.23	UGL	111.5	(70-130)
MSD	Butachlor	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Butachlor	114.000	116.000	UGL	1.7	(0-20)
RPD_MS	Butachlor	111.500	112.500	UGL	0.9	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Caffeine by method 525mod	2	1.46	UGL	73.0	(45-137)
LCS2	Caffeine by method 525mod	2	1.41	UGL	70.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.02	UGL		
MS	Caffeine by method 525mod	2	1.46	UGL	73.0	(46-144)
MSD	Caffeine by method 525mod	2	1.45	UGL	72.5	(46-144)
RPD_LCS	Caffeine by method 525mod	73.000	70.500	UGL	3.5	(0-20)
RPD_MS	Caffeine by method 525mod	73.000	72.500	UGL	0.7	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.14	UGL	107.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MS	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
MSD	Chlorothalonil(Draconil,Bravo)	2	2.07	UGL	103.5	(70-130)
RPD_MS	Chlorothalonil(Draconil,Bravo)	104.500	103.500	UGL	1.0	(0-20)
LCS1	Chrysene	2	2.06	UGL	103.0	(70-130)
LCS2	Chrysene	2	2.05	UGL	102.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	2.05	UGL	102.5	(70-130)
MSD	Chrysene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Chrysene	103.000	102.500	UGL	0.5	(0-20)
RPD_MS	Chrysene	102.500	102.500	UGL	0.0	(0-20)
LCS1	Chlorobenzilate	2	2.24	UGL	112.0	(70-130)
LCS2	Chlorobenzilate	2	2.17	UGL	108.5	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.18	UGL	109.0	(70-130)
MSD	Chlorobenzilate	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Chlorobenzilate	112.000	108.500	UGL	3.2	(0-20)
RPD_MS	Chlorobenzilate	109.000	106.500	UGL	2.3	(0-20)
LCS1	Chloroneb	2	2.06	UGL	103.0	(70-130)
LCS2	Chloroneb	2	2.04	UGL	102.0	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.04	UGL	102.0	(70-130)
MSD	Chloroneb	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Chloroneb	103.000	102.000	UGL	1.0	(0-20)
RPD_MS	Chloroneb	102.000	104.000	UGL	1.9	(0-20)
LCS1	Delta-BHC	2	2.09	UGL	104.5	(70-130)

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Locus Technologies
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LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.10	UGL	105.0	(70-130)
MSD	Delta-BHC	2	2.07	UGL	103.5	(70-130)
RPD_MS	Delta-BHC	105.000	103.500	UGL	1.4	(0-20)
LCS1	Dibenz(a,h)Anthracene	2	1.91	UGL	95.5	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.01	UGL	100.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.04	UGL	102.0	(70-130)
MSD	Dibenz(a,h)Anthracene	2	1.76	UGL	88.0	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	95.500	100.500	UGL	5.1	(0-20)
RPD_MS	Dibenz(a,h)Anthracene	102.000	88.000	UGL	14.7	(0-20)
LCS1	4,4'-DDD	2	2.16	UGL	108.0	(70-130)
LCS2	4,4'-DDD	2	2.15	UGL	107.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.08	UGL	104.0	(70-130)
MSD	4,4'-DDD	2	2.11	UGL	105.5	(70-130)
RPD_LCS	4,4'-DDD	108.000	107.500	UGL	0.5	(0-20)
RPD_MS	4,4'-DDD	104.000	105.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	2.09	UGL	104.5	(70-130)
LCS2	4,4'-DDE	2	2.15	UGL	107.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	2.05	UGL	102.5	(70-130)
MSD	4,4'-DDE	2	1.94	UGL	97.0	(70-130)
RPD_LCS	4,4'-DDE	104.500	107.500	UGL	2.8	(0-20)
RPD_MS	4,4'-DDE	102.500	97.000	UGL	5.5	(0-20)
LCS1	4,4'-DDT	2	2.18	UGL	109.0	(70-130)
LCS2	4,4'-DDT	2	2.12	UGL	106.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MSD	4,4'-DDT	2	2.02	UGL	101.0	(70-130)
RPD_LCS	4,4'-DDT	109.000	106.000	UGL	2.8	(0-20)
RPD_MS	4,4'-DDT	103.000	101.000	UGL	2.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.19	UGL	109.5	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.14	UGL	107.0	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Dichlorvos (DDVP)	2	2.20	UGL	110.0	(70-130)
MSD	Dichlorvos (DDVP)	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	109.500	107.000	UGL	2.3	(0-20)
RPD_MS	Dichlorvos (DDVP)	110.000	104.500	UGL	5.1	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.19	UGL	109.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	2.21	UGL	110.5	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	2.16	UGL	108.0	(70-130)
MSD	Di-(2-Ethylhexyl)adipate	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	109.500	110.500	UGL	0.9	(0-20)
RPD_MS	Di-(2-Ethylhexyl)adipate	108.000	106.500	UGL	1.4	(0-20)
LCS1	Diethylphthalate	2	2.34	UGL	117.0	(70-130)
LCS2	Diethylphthalate	2	2.23	UGL	111.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.19	UGL	109.5	(70-130)
MSD	Diethylphthalate	2	2.21	UGL	110.5	(70-130)
RPD_LCS	Diethylphthalate	117.000	111.500	UGL	4.8	(0-20)
RPD_MS	Diethylphthalate	109.500	110.500	UGL	0.9	(0-20)
LCS1	Dieldrin	2	2.19	UGL	109.5	(70-130)
LCS2	Dieldrin	2	2.15	UGL	107.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.21	UGL	110.5	(70-130)
MSD	Dieldrin	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Dieldrin	109.500	107.500	UGL	1.8	(0-20)
RPD_MS	Dieldrin	110.500	111.000	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.18	UGL	109.0	(70-130)
MSD	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.500	UGL	0.5	(0-20)
RPD_MS	Dimethylphthalate	109.000	105.000	UGL	3.7	(0-20)
LCS1	Dimethoate	2	1.15	UGL	57.5	(35-100)
LCS2	Dimethoate	2	1.10	UGL	55.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.25	UGL	62.5	(34-111)

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Locus Technologies
(continued)

MSD	Dimethoate	2	1.22	UGL	61.0	(34-111)
RPD_LCS	Dimethoate	57.500	55.000	UGL	4.4	(0-20)
RPD_MS	Dimethoate	62.500	61.000	UGL	2.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.74	UGL	118.5	(70-130)
LCS2	Di-n-Butylphthalate	4	4.78	UGL	119.5	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	4.75	UGL	118.8	(70-130)
MSD	Di-n-Butylphthalate	4	4.68	UGL	117.0	(70-130)
RPD_LCS	Di-n-Butylphthalate	118.500	119.500	UGL	0.8	(0-20)
RPD_MS	Di-n-Butylphthalate	118.750	117.000	UGL	1.5	(0-20)
LCS1	Di-N-octylphthalate	2	2.07	UGL	103.5	(70-130)
LCS2	Di-N-octylphthalate	2	2.07	UGL	103.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	2.06	UGL	103.0	(70-130)
MSD	Di-N-octylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Di-N-octylphthalate	103.500	103.500	UGL	0.0	(0-20)
RPD_MS	Di-N-octylphthalate	103.000	100.000	UGL	3.0	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.16	UGL	108.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.11	UGL	105.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
MSD	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	108.000	105.500	UGL	2.3	(0-20)
RPD_MS	Chlorpyrifos (Dursban)	103.500	103.500	UGL	0.0	(0-20)
LCS1	Endrin Aldehyde	2	2.17	UGL	108.5	(70-130)
LCS2	Endrin Aldehyde	2	2.06	UGL	103.0	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.99	UGL	99.5	(70-130)
MSD	Endrin Aldehyde	2	2.05	UGL	102.5	(70-130)
RPD_MS	Endrin Aldehyde	99.500	102.500	UGL	3.0	(0-20)
LCS1	Endrin	2	2.02	UGL	101.0	(70-130)
LCS2	Endrin	2	2.01	UGL	100.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	1.83	UGL	91.5	(70-130)
MSD	Endrin	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Endrin	101.000	100.500	UGL	0.5	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_MS	Endrin	91.500	94.000	UGL	2.7	(0-20)
LCS1	EPTC	2	2.09	UGL	104.5	(70-130)
LCS2	EPTC	2	2.14	UGL	107.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.12	UGL	106.0	(70-130)
MSD	EPTC	2	2.09	UGL	104.5	(70-130)
RPD_LCS	EPTC	104.500	107.000	UGL	2.4	(0-20)
RPD_MS	EPTC	106.000	104.500	UGL	1.4	(0-20)
LCS1	Endosulfan I (Alpha)	2	2.08	UGL	104.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	2.02	UGL	101.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	2.06	UGL	103.0	(70-130)
MSD	Endosulfan I (Alpha)	2	1.90	UGL	95.0	(70-130)
RPD_MS	Endosulfan I (Alpha)	103.000	95.000	UGL	8.1	(0-20)
LCS1	Endosulfan II (Beta)	2	2.19	UGL	109.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	2.02	UGL	101.0	(70-130)
MSD	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
RPD_MS	Endosulfan II (Beta)	101.000	100.000	UGL	1.0	(0-20)
LCS1	Endosulfan Sulfate	2	2.14	UGL	107.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.22	UGL	111.0	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	2.15	UGL	107.5	(70-130)
MSD	Endosulfan Sulfate	2	2.06	UGL	103.0	(70-130)
RPD_MS	Endosulfan Sulfate	107.500	103.000	UGL	4.3	(0-20)
LCS1	Fluoranthene	2	2.24	UGL	112.0	(70-130)
LCS2	Fluoranthene	2	2.22	UGL	111.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.17	UGL	108.5	(70-130)
MSD	Fluoranthene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Fluoranthene	112.000	111.000	UGL	0.9	(0-20)
RPD_MS	Fluoranthene	108.500	109.000	UGL	0.5	(0-20)
LCS1	Fluorene	2	2.14	UGL	107.0	(70-130)
LCS2	Fluorene	2	2.07	UGL	103.5	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Fluorene	2	2.08	UGL	104.0	(70-130)
MSD	Fluorene	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Fluorene	107.000	103.500	UGL	3.3	(0-20)
RPD_MS	Fluorene	104.000	105.500	UGL	1.4	(0-20)
LCS1	gamma-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	gamma-Chlordane	2	2.09	UGL	104.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.11	UGL	105.5	(70-130)
MSD	gamma-Chlordane	2	2.06	UGL	103.0	(70-130)
RPD_LCS	gamma-Chlordane	103.000	104.500	UGL	1.4	(0-20)
RPD_MS	gamma-Chlordane	105.500	103.000	UGL	2.4	(0-20)
LCS1	Hexachlorobenzene	2	2.13	UGL	106.5	(70-130)
LCS2	Hexachlorobenzene	2	2.10	UGL	105.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MSD	Hexachlorobenzene	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Hexachlorobenzene	106.500	105.000	UGL	1.4	(0-20)
RPD_MS	Hexachlorobenzene	104.000	106.000	UGL	1.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.04	UGL	102.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.07	UGL	103.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	1.93	UGL	96.5	(70-130)
MSD	Hexachlorocyclopentadiene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	102.000	103.500	UGL	1.5	(0-20)
RPD_MS	Hexachlorocyclopentadiene	96.500	102.500	UGL	6.0	(0-20)
LCS1	Heptachlor	2	2.02	UGL	101.0	(70-130)
LCS2	Heptachlor	2	2.05	UGL	102.5	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	2.03	UGL	101.5	(70-130)
MSD	Heptachlor	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Heptachlor	101.000	102.500	UGL	1.5	(0-20)
RPD_MS	Heptachlor	101.500	103.500	UGL	2.0	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.19	UGL	109.5	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	2.15	UGL	107.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		

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MS	Heptachlor Epoxide (isomer B)	2	2.13	UGL	106.5	(70-130)
MSD	Heptachlor Epoxide (isomer B)	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	109.500	107.500	UGL	1.8	(0-20)
RPD_MS	Heptachlor Epoxide (isomer B)	106.500	108.000	UGL	1.4	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	1.95	UGL	97.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.05	UGL	102.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.05	UGL	102.5	(70-130)
MSD	Indeno(1,2,3,c,d)Pyrene	2	1.79	UGL	89.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	97.500	102.500	UGL	5.0	(0-20)
RPD_MS	Indeno(1,2,3,c,d)Pyrene	102.500	89.500	UGL	13.5	(0-20)
LCS1	Isophorone	2	2.06	UGL	103.0	(70-130)
LCS2	Isophorone	2	2.05	UGL	102.5	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	2.05	UGL	102.5	(70-130)
MSD	Isophorone	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Isophorone	103.000	102.500	UGL	0.5	(0-20)
RPD_MS	Isophorone	102.500	99.500	UGL	3.0	(0-20)
LCS1	Lindane	2	1.96	UGL	98.0	(70-130)
LCS2	Lindane	2	1.98	UGL	99.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.020	UGL	100.0	(50-150)
MS	Lindane	2	1.96	UGL	98.0	(70-130)
MSD	Lindane	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Lindane	98.000	99.000	UGL	1.0	(0-20)
RPD_MS	Lindane	98.000	102.500	UGL	4.5	(0-20)
LCS1	Methoxychlor	2	2.16	UGL	108.0	(70-130)
LCS2	Methoxychlor	2	2.13	UGL	106.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
MSD	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	108.000	106.500	UGL	1.4	(0-20)
RPD_MS	Methoxychlor	107.500	107.500	UGL	0.0	(0-20)
LCS1	Metribuzin	2	1.95	UGL	97.5	(70-130)
LCS2	Metribuzin	2	1.95	UGL	97.5	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		

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Locus Technologies
(continued)

MS	Metribuzin	2	1.93	UGL	96.5	(70-130)
MSD	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	97.500	97.500	UGL	0.0	(0-20)
RPD_MS	Metribuzin	96.500	98.000	UGL	1.5	(0-20)
LCS1	Malathion	2	2.24	UGL	112.0	(70-130)
LCS2	Malathion	2	2.27	UGL	113.5	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.22	UGL	111.0	(70-130)
MSD	Malathion	2	2.21	UGL	110.5	(70-130)
RPD_LCS	Malathion	112.000	113.500	UGL	1.3	(0-20)
RPD_MS	Malathion	111.000	110.500	UGL	0.5	(0-20)
LCS1	Molinate	2	2.18	UGL	109.0	(70-130)
LCS2	Molinate	2	2.17	UGL	108.5	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.19	UGL	109.5	(70-130)
MSD	Molinate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Molinate	109.000	108.500	UGL	0.5	(0-20)
RPD_MS	Molinate	109.500	108.500	UGL	0.9	(0-20)
LCS1	Metolachlor	2	2.24	UGL	112.0	(70-130)
LCS2	Metolachlor	2	2.23	UGL	111.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.22	UGL	111.0	(70-130)
MSD	Metolachlor	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Metolachlor	112.000	111.500	UGL	0.4	(0-20)
RPD_MS	Metolachlor	111.000	109.000	UGL	1.8	(0-20)
LCS1	Naphthalene	2	2.04	UGL	102.0	(70-130)
LCS2	Naphthalene	2	2.00	UGL	100.0	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MS	Naphthalene	2	1.95	UGL	97.5	(70-130)
MSD	Naphthalene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Naphthalene	102.000	100.000	UGL	2.0	(0-20)
RPD_MS	Naphthalene	97.500	100.500	UGL	3.0	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.15	UGL	107.5	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.07	UGL	103.5	(70-130)

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Locus Technologies
(continued)

MSD	trans-Nonachlor	2	2.09	UGL	104.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.500	UGL	0.5	(0-20)
RPD_MS	trans-Nonachlor	103.500	104.500	UGL	1.0	(0-20)
LCS1	Pentachlorophenol	8	8.95	UGL	111.9	(70-130)
LCS2	Pentachlorophenol	8	11	UGL	137.5	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	10.62	UGL	132.8	(70-130)
MSD	Pentachlorophenol	8	9.16	UGL	114.5	(70-130)
RPD_LCS	Pentachlorophenol	111.875	137.500	UGL	20.6	(0-20)
RPD_MS	Pentachlorophenol	132.750	114.500	UGL	14.8	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.32	UGL	108.0	(70-130)
LCS2	Permethrin (mixed isomers)	4	4.27	UGL	106.7	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	4.23	UGL	105.8	(70-130)
MSD	Permethrin (mixed isomers)	4	4.17	UGL	104.2	(70-130)
RPD_LCS	Permethrin (mixed isomers)	108.000	106.750	UGL	1.2	(0-20)
RPD_MS	Permethrin (mixed isomers)	105.750	104.250	UGL	1.4	(0-20)
LCS1	Phenanthrene	2	2.05	UGL	102.5	(70-130)
LCS2	Phenanthrene	2	2.06	UGL	103.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	2.05	UGL	102.5	(70-130)
MSD	Phenanthrene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Phenanthrene	102.500	103.000	UGL	0.5	(0-20)
RPD_MS	Phenanthrene	102.500	102.000	UGL	0.5	(0-20)
LCS1	Propachlor	2	2.07	UGL	103.5	(70-130)
LCS2	Propachlor	2	1.99	UGL	99.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.03	UGL	101.5	(70-130)
MSD	Propachlor	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Propachlor	103.500	99.500	UGL	3.9	(0-20)
RPD_MS	Propachlor	101.500	94.000	UGL	7.7	(0-20)
LCS1	Parathion	2	2.33	UGL	116.5	(70-130)
LCS2	Parathion	2	2.21	UGL	110.5	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	2.22	UGL	111.0	(70-130)

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Locus Technologies
(continued)

MSD	Parathion	2	2.24	UGL	112.0	(70-130)
RPD_LCS	Parathion	116.500	110.500	UGL	5.3	(0-20)
RPD_MS	Parathion	111.000	112.000	UGL	0.9	(0-20)
LCS1	Pyrene	2	2.18	UGL	109.0	(70-130)
LCS2	Pyrene	2	2.16	UGL	108.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.11	UGL	105.5	(70-130)
MSD	Pyrene	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Pyrene	109.000	108.000	UGL	0.9	(0-20)
RPD_MS	Pyrene	105.500	108.000	UGL	2.3	(0-20)
LCS1	Simazine	2	1.99	UGL	99.5	(70-130)
LCS2	Simazine	2	1.97	UGL	98.5	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	1.98	UGL	99.0	(70-130)
MSD	Simazine	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Simazine	99.500	98.500	UGL	1.0	(0-20)
RPD_MS	Simazine	99.000	102.000	UGL	3.0	(0-20)
LCS1	Perylene-d12	100	90	%R	90.0	(70-130)
LCS2	Perylene-d12	100	92	%R	92.0	(70-130)
MBLK	Perylene-d12	100	81	%R	81.0	
MRLLW	Perylene-d12	100	79	%R	79.0	(70-130)
MS	Perylene-d12	100	94	%R	94.0	(70-130)
MSD	Perylene-d12	100	87	%R	87.0	(70-130)
RPD_MS	Perylene-d12	94.000	87.000	%R	92.6	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	94	%R	94.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	100	%R	100.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	93	%R	93.0	(70-130)
MSD	1,3-dimethyl-2-nitrobenzene	100	94	%R	94.0	(70-130)
RPD_MS	1,3-dimethyl-2-nitrobenzene	93.000	94.000	%R	101.1	(70-130)
LCS1	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS2	Triphenylphosphate	100	105	%R	105.0	(70-130)
MBLK	Triphenylphosphate	100	101	%R	101.0	
MRLLW	Triphenylphosphate	100	102	%R	102.0	(70-130)
MS	Triphenylphosphate	100	99	%R	99.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MSD	Triphenylphosphate	100	102	%R	102.0	(70-130)
RPD_MS	Triphenylphosphate	99.000	102.000	%R	103.0	(70-130)
LCS1	Thiobencarb	2	2.24	UGL	112.0	(70-130)
LCS2	Thiobencarb	2	2.24	UGL	112.0	(70-130)
MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.20	UGL	110.0	(70-130)
MSD	Thiobencarb	2	2.21	UGL	110.5	(70-130)
RPD_LCS	Thiobencarb	112.000	112.000	UGL	0.0	(0-20)
RPD_MS	Thiobencarb	110.000	110.500	UGL	0.5	(0-20)
LCS1	Terbacil	2	2.19	UGL	109.5	(70-130)
LCS2	Terbacil	2	2.04	UGL	102.0	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.05	UGL	102.5	(70-130)
MSD	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	109.500	102.000	UGL	7.1	(0-20)
RPD_MS	Terbacil	102.500	104.500	UGL	1.9	(0-20)
LCS1	Trifluralin	2	2.19	UGL	109.5	(70-130)
LCS2	Trifluralin	2	2.21	UGL	110.5	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.29	UGL	114.5	(70-130)
MSD	Trifluralin	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Trifluralin	109.500	110.500	UGL	0.9	(0-20)
RPD_MS	Trifluralin	114.500	110.000	UGL	4.0	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

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Laboratory Report

for

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Fax: (650) 960-0739

REVISED

DATE OF ISSUE
Apr 10 2009
MWH LABORATORIES

01114CA

JAU Joseph A Ureno
Project Manager

Report#: 245234
Project: RECLAIMED

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Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report, totaling 49 page[s].

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ACKNOWLEDGMENT OF SAMPLES RECEIVED

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Customer Code: LOCUS
Group#: 245234
Project#: RECLAIMED
Proj Mgr: Allen Glover
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The following samples were received from you on **06/24/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2806240503	SCRWA-B 2514F	@525PLUS	Water	18-jun-2008 14:30:00
2806240504	SCRWA-B 2514F	@PFC EDTASUB NTASUB	Water	19-jun-2008 15:30:00
2806240505	SCRWA-B 2514F	@525PLUS @NDMA	Water	20-jun-2008 16:00:00
2806240506	SJ/SC-D 2514D	@525PLUS @NDMA EDTASUB NTASUB	Water	19-jun-2008 12:00:00
2806240507	SJ/SC-D 2514D	@525PLUS	Water	23-jun-2008 12:15:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

25234 1 of 1

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ____________ (SIGN)

SAMPLERS Vector (PRINT)
Susan Steward (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB MWH Laboratories

LABORATORY USE ONLY

LAB PROJECT NO. ____________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO_3	HCL		Field Filtered (check)	ANALYSIS REQUESTED: 525.1	NDMA	NTA	EDTA	PEC					TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/18	1430	SCRWA-B 2514F								X			X									1	14 days					
2	6/19	1530	↓													X	X						1	7 days					
3	6/19	1530	↓															X					1	14 days					
4	6/20	1600	↓								X			X									1	14 days					
5	6/20	1600	↓												X								1	28 days					
6	6/19	1200	SJ/SC-D 2514D												X								1	28 days					
7	6/19	1200	↓													X	X						1	7 days					
8	6/19	1400	↓								X			X									1	14 days					
9	6/23	1215	↓								X			X									1	14 days					
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time
On Trac Courier	Icebox		Susan Steward	6/23/08	

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Susan Steward		06/24/08	09:30

Received for lab By: (Signature) ____ Date ____ Time ____

Send Lab Results to (Name): Norman Wong (Check Office Below)

Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ____________ TEL ________ FAX ________

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive
Suite 100
Monrovia, California 91016-3629
Tel: 626 568 6400
Fax: 626 568 6324
1 800 566 LABS (1 800 566 5227)

**Report
Comments
#245234**

Group Comments

MS recoveries for Anthracene, Benzo(a)Anthracene and Benzo(a)pyrene were low. However, data is acceptable based on passing LCS/other QC and the MS was not a Locus Technologies sample.

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1 800 566 LABS (1 800 566 5227)

Laboratory Hits Report #245234

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
24-jun-2008 19:08:56

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2806240503	**SCRWA-B 2514F**				
	2806240504	**SCRWA-B 2514F**				
07/05/08	Perfluoro octanoic acid - PFOA		82		ng/l	20
	2806240505	**SCRWA-B 2514F**				
07/02/08	N-Nitroso dimethylamine (NDMA)		2.5		ng/l	2.0
	2806240506	**SJ/SC-D 2514D**				
07/02/08	N-Nitroso dimethylamine (NDMA)		139		ng/l	2.0
06/27/08	EDTA by Ion Chrom-Subcontract		100		ug/l	100
	2806240507	**SJ/SC-D 2514D**				

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive
Suite 100
Monrovia, California 91016-3629
Tel: 626 568 6400
Fax: 626 568 6324
1 800 566 LABS (1 800 566 5227)

Laboratory Data Report #245234

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
06/24/08

SCRWA-B 2514F (2806240503) Sampled on 06/18/08 14:30

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/02/08	07/10/08 23:59	438687	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	107	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	98	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	92	% Rec		

SCRWA-B 2514F (2806240504) Sampled on 06/19/08 15:30

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	06/27/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**ND**	**ug/l**	**100**	**1**
	06/27/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 05:46	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 05:46	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	82	ng/l	20	1
	07/05/08 05:46	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOS-C13	NA	% Rec		
			(MWH PFC)	PFOA-C13	106	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		

SCRWA-B 2514F (2806240505) Sampled on 06/20/08 16:00

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Endrin	ND	ug/l	0.2	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/03/08	07/11/08 19:24	438711	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	94	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	104	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	102	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/26/08	07/02/08 00:00	436079	(EPA 521/1625)	N-Nitroso dimethylamine (NDMA)	2.5	ng/l	2.0	1
			(EPA 521/1625)	NDMA-D6(50-150)-Int Std	97	% Rec		

SJ/SC-D 2514D (2806240506) Sampled on 06/19/08 12:00

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	06/27/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**100**	**ug/l**	**100**	**1**
	06/27/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Molinate	ND	ug/l	0.1	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/03/08	07/11/08 18:17	438711	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	83	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	100	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	97	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/26/08	07/02/08 00:00	436079	(EPA 521/1625)	N-Nitroso dimethylamine (NDMA)	139	ng/l	2.0	1
			(EPA 521/1625)	NDMA-D6(50-150)-Int Std	91	% Rec		

SJ/SC-D 2514D (2806240507)   Sampled on 06/23/08 12:15

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1

Locus Technologies
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Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/07/08	07/12/08 13:13	438722	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	105	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	78	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	107	% Rec		

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Laboratory
QC Summary
#245234

Locus Technologies

QC Ref #436079 - N-Nitroso dimethylamine (NDMA) Analysis Date: 07/02/2008

2806240505	SCRWA-B 2514F
2806240506	SJ/SC-D 2514D

QC Ref #438687 - 525 Semivolatiles by GC/MS Analysis Date: 07/10/2008

2806240503	SCRWA-B 2514F

QC Ref #438711 - 525 Semivolatiles by GC/MS Analysis Date: 07/11/2008

2806240505	SCRWA-B 2514F
2806240506	SJ/SC-D 2514D

QC Ref #438722 - 525 Semivolatiles by GC/MS Analysis Date: 07/12/2008

2806240507	SJ/SC-D 2514D

QC Ref #441250 - Perfluorinated compounds Analysis Date: 07/05/2008

2806240504	SCRWA-B 2514F

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Laboratory
QC Report
#245234

Locus Technologies

QC Ref #436079 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	06230111	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.42	NGL	121.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	11.0	NGL	110.0	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	11.5	NGL	115.0	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	121.000	113.000	NGL	6.8	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	110.000	115.000	NGL	4.4	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	100	%R	100.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	97	%R	97.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	79	%R	79.0		
MS	NDMA-d6(Internal Standard)	100	92	%R	92.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	80	%R	80.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	100.000	97.000	%R	3.0	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	92.000	80.000	%R	14.0	(0-20)	

QC Ref #438687 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,4-Dinitrotoluene	0.1	0.090	UGL	90.0	(50-150)	
MS	2,4-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	96.500	93.500	UGL	3.2	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.92	UGL	96.0	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.98	UGL	99.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,6-Dinitrotoluene	0.1	0.090	UGL	90.0	(50-150)	
MS	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	96.000	99.000	UGL	3.1	(0-20)	
LCS1	Alpha-BHC	2	2.23	UGL	111.5	(70-130)	

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Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Alpha-BHC	2	2.19	UGL	109.5	(70-130)
MBLK	Alpha-BHC	ND	<0.1	UGL		
MRLHI	Alpha-BHC	0.1	0.10	UGL	100.0	(50-150)
MS	Alpha-BHC	2	2.22	UGL	111.0	(70-130)
LCS1	alpha-Chlordane	2	2.22	UGL	111.0	(70-130)
LCS2	alpha-Chlordane	2	2.17	UGL	108.5	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MRLHI	alpha-Chlordane	0.1	0.12	UGL	120.0	(50-150)
MS	alpha-Chlordane	2	2.29	UGL	114.5	(70-130)
RPD_LCS	alpha-Chlordane	111.000	108.500	UGL	2.3	(0-20)
LCS1	Diazinon (Qualitative)	2	1.95	UGL	97.5	(70-130)
LCS2	Diazinon (Qualitative)	2	1.96	UGL	98.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MRLHI	Diazinon (Qualitative)	0.1	0.090	UGL	90.0	(50-150)
MS	Diazinon (Qualitative)	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	97.500	98.000	UGL	0.5	(0-20)
MS	Spiked sample	Lab # 28	06200102	NONE		(0-0)
LCS1	Acenaphthene	2	2.17	UGL	108.5	(70-130)
LCS2	Acenaphthene	2	2.13	UGL	106.5	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MRLHI	Acenaphthene	0.1	0.11	UGL	110.0	(50-150)
MS	Acenaphthene	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Acenaphthene	108.500	106.500	UGL	1.9	(0-20)
LCS1	Acenaphthylene	2	2.15	UGL	107.5	(70-130)
LCS2	Acenaphthylene	2	2.12	UGL	106.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MRLHI	Acenaphthylene	0.1	0.10	UGL	100.0	(50-150)
MS	Acenaphthylene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Acenaphthylene	107.500	106.000	UGL	1.4	(0-20)
LCS1	Acetochlor	2	2.14	UGL	107.0	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MRLHI	Acetochlor	0.1	0.080	UGL	80.0	(50-150)
MS	Acetochlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Acetochlor	107.000	103.000	UGL	3.8	(0-20)
LCS1	Alachlor	2	2.14	UGL	107.0	(70-130)

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LCS2	Alachlor	2	2.17	UGL	108.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLHI	Alachlor	0.1	0.10	UGL	100.0	(50-150)
MS	Alachlor	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Alachlor	107.000	108.500	UGL	1.4	(0-20)
LCS1	Aldrin	2	1.97	UGL	98.5	(70-130)
LCS2	Aldrin	2	1.97	UGL	98.5	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MRLHI	Aldrin	0.1	0.11	UGL	110.0	(50-150)
MS	Aldrin	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Aldrin	98.500	98.500	UGL	0.0	(0-20)
LCS1	Anthracene	2	2.00	UGL	100.0	(70-130)
LCS2	Anthracene	2	1.99	UGL	99.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLHI	Anthracene	0.1	0.080	UGL	80.0	(50-150)
MS	Anthracene	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Anthracene	100.000	99.500	UGL	0.5	(0-20)
LCS1	Atrazine	2	2.21	UGL	110.5	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MRLHI	Atrazine	0.1	0.11	UGL	110.0	(50-150)
MS	Atrazine	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Atrazine	110.500	108.500	UGL	1.8	(0-20)
LCS1	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
LCS2	Benz(a)Anthracene	2	1.99	UGL	99.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLHI	Benz(a)Anthracene	0.1	0.10	UGL	100.0	(50-150)
MS	Benz(a)Anthracene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.000	99.500	UGL	2.5	(0-20)
LCS1	Benzo(a)pyrene	2	2.12	UGL	106.0	(70-130)
LCS2	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLHI	Benzo(a)pyrene	0.1	0.080	UGL	80.0	(50-150)
MS	Benzo(a)pyrene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Benzo(a)pyrene	106.000	104.500	UGL	1.4	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)

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LCS2	Benzo(b)Fluoranthene	2	2.22	UGL	111.0	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(b)Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	111.000	UGL	3.7	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	2.18	UGL	109.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLHI	Benzo(g,h,i)Perylene	0.1	0.090	UGL	90.0	(50-150)
MS	Benzo(g,h,i)Perylene	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	109.000	107.500	UGL	1.4	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.18	UGL	109.0	(70-130)
LCS2	Benzo(k)Fluoranthene	2	2.09	UGL	104.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(k)Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	109.000	104.500	UGL	4.2	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	2.11	UGL	105.5	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	2.01	UGL	100.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MRLHI	Di(2-Ethylhexyl)phthalate	0.3	0.32	UGL	106.7	(50-150)
MS	Di(2-Ethylhexyl)phthalate	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	105.500	100.500	UGL	4.9	(0-20)
LCS1	Beta-BHC	2	2.26	UGL	113.0	(70-130)
LCS2	Beta-BHC	2	2.16	UGL	108.0	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MRLHI	Beta-BHC	0.1	0.10	UGL	100.0	(50-150)
MS	Beta-BHC	2	2.28	UGL	114.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.36	UGL	118.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.33	UGL	116.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MRLHI	Butylbenzylphthalate	0.3	0.29	UGL	96.7	(50-150)
MS	Butylbenzylphthalate	2	2.34	UGL	117.0	(70-130)
RPD_LCS	Butylbenzylphthalate	118.000	116.500	UGL	1.3	(0-20)
LCS1	Bromacil	2	2.38	UGL	119.0	(70-130)
LCS2	Bromacil	2	2.29	UGL	114.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
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MBLK	Bromacil	ND	<0.2	UGL		
MRLHI	Bromacil	0.1	0.050	UGL	50.0	(50-150)
MS	Bromacil	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Bromacil	119.000	114.500	UGL	3.9	(0-20)
LCS1	Butachlor	2	2.33	UGL	116.5	(70-130)
LCS2	Butachlor	2	2.39	UGL	119.5	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLHI	Butachlor	0.1	0.11	UGL	110.0	(50-150)
MS	Butachlor	2	2.48	UGL	124.0	(70-130)
RPD_LCS	Butachlor	116.500	119.500	UGL	2.5	(0-20)
LCS1	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MRLHI	Caffeine by method 525mod	0.1	0.070	UGL	70.0	(50-150)
MS	Caffeine by method 525mod	2	1.65	UGL	82.5	(46-144)
RPD_LCS	Caffeine by method 525mod	84.500	84.500	UGL	0.0	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.26	UGL	113.0	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.16	UGL	108.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MRLHI	Chlorothalonil(Draconil,Bravo)	0.1	0.10	UGL	100.0	(50-150)
MS	Chlorothalonil(Draconil,Bravo)	2	2.13	UGL	106.5	(70-130)
LCS1	Chrysene	2	2.13	UGL	106.5	(70-130)
LCS2	Chrysene	2	2.11	UGL	105.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLHI	Chrysene	0.1	0.10	UGL	100.0	(50-150)
MS	Chrysene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chrysene	106.500	105.500	UGL	0.9	(0-20)
LCS1	Chlorobenzilate	2	2.34	UGL	117.0	(70-130)
LCS2	Chlorobenzilate	2	2.28	UGL	114.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MRLHI	Chlorobenzilate	0.1	0.070	UGL	70.0	(50-150)
MS	Chlorobenzilate	2	2.36	UGL	118.0	(70-130)
RPD_LCS	Chlorobenzilate	117.000	114.000	UGL	2.6	(0-20)
LCS1	Chloroneb	2	2.09	UGL	104.5	(70-130)
LCS2	Chloroneb	2	2.11	UGL	105.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		

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MRLHI	Chloroneb	0.1	0.10	UGL	100.0	(50-150)
MS	Chloroneb	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Chloroneb	104.500	105.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.19	UGL	109.5	(70-130)
LCS2	Delta-BHC	2	2.22	UGL	111.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MRLHI	Delta-BHC	0.1	0.11	UGL	110.0	(50-150)
MS	Delta-BHC	2	2.24	UGL	112.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.17	UGL	108.5	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.09	UGL	104.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLHI	Dibenz(a,h)Anthracene	0.1	0.10	UGL	100.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	108.500	104.500	UGL	3.8	(0-20)
LCS1	4,4'-DDD	2	2.28	UGL	114.0	(70-130)
LCS2	4,4'-DDD	2	2.22	UGL	111.0	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MRLHI	4,4'-DDD	0.1	0.10	UGL	100.0	(50-150)
MS	4,4'-DDD	2	2.27	UGL	113.5	(70-130)
RPD_LCS	4,4'-DDD	114.000	111.000	UGL	2.7	(0-20)
LCS1	4,4'-DDE	2	2.25	UGL	112.5	(70-130)
LCS2	4,4'-DDE	2	2.12	UGL	106.0	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MRLHI	4,4'-DDE	0.1	0.11	UGL	110.0	(50-150)
MS	4,4'-DDE	2	2.18	UGL	109.0	(70-130)
RPD_LCS	4,4'-DDE	112.500	106.000	UGL	5.9	(0-20)
LCS1	4,4'-DDT	2	2.13	UGL	106.5	(70-130)
LCS2	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MRLHI	4,4'-DDT	0.1	0.070	UGL	70.0	(50-150)
MS	4,4'-DDT	2	2.10	UGL	105.0	(70-130)
RPD_LCS	4,4'-DDT	106.500	97.500	UGL	8.8	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.19	UGL	109.5	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.16	UGL	108.0	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLHI	Dichlorvos (DDVP)	0.1	0.090	UGL	90.0	(50-150)

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Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Dichlorvos (DDVP)	2	2.21	UGL	110.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	109.500	108.000	UGL	1.4	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.27	UGL	113.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	2.15	UGL	107.5	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MRLHI	Di-(2-Ethylhexyl)adipate	0.3	0.28	UGL	93.3	(50-150)
MS	Di-(2-Ethylhexyl)adipate	2	2.27	UGL	113.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	113.500	107.500	UGL	5.4	(0-20)
LCS1	Diethylphthalate	2	2.35	UGL	117.5	(70-130)
LCS2	Diethylphthalate	2	2.21	UGL	110.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MRLHI	Diethylphthalate	0.3	0.35	UGL	116.7	(50-150)
MS	Diethylphthalate	2	2.49	UGL	124.5	(70-130)
RPD_LCS	Diethylphthalate	117.500	110.500	UGL	6.1	(0-20)
LCS1	Dieldrin	2	2.34	UGL	117.0	(70-130)
LCS2	Dieldrin	2	2.26	UGL	113.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MRLHI	Dieldrin	0.1	0.12	UGL	120.0	(50-150)
MS	Dieldrin	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Dieldrin	117.000	113.000	UGL	3.5	(0-20)
LCS1	Dimethylphthalate	2	2.18	UGL	109.0	(70-130)
LCS2	Dimethylphthalate	2	2.18	UGL	109.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MRLHI	Dimethylphthalate	0.3	0.31	UGL	103.3	(50-150)
MS	Dimethylphthalate	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Dimethylphthalate	109.000	109.000	UGL	0.0	(0-20)
LCS1	Dimethoate	2	1.31	UGL	65.5	(35-100)
LCS2	Dimethoate	2	1.40	UGL	70.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MRLHI	Dimethoate	0.1	0.070	UGL	70.0	(50-150)
MS	Dimethoate	2	1.46	UGL	73.0	(34-111)
RPD_LCS	Dimethoate	65.500	70.000	UGL	6.6	(0-20)
LCS1	Di-n-Butylphthalate	4	4.86	UGL	121.5	(70-130)
LCS2	Di-n-Butylphthalate	4	4.77	UGL	119.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MRLHI	Di-n-Butylphthalate	0.3	0.40	UGL	133.3	(50-150)

MS	Di-n-Butylphthalate	4	4.84	UGL	121.0	(70-130)
RPD_LCS	Di-n-Butylphthalate	121.500	119.250	UGL	1.9	(0-20)
LCS1	Di-N-octylphthalate	2	2.18	UGL	109.0	(70-130)
LCS2	Di-N-octylphthalate	2	2.00	UGL	100.0	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MRLHI	Di-N-octylphthalate	0.1	0.070	UGL	70.0	(50-150)
MS	Di-N-octylphthalate	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Di-N-octylphthalate	109.000	100.000	UGL	8.6	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.17	UGL	108.5	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.16	UGL	108.0	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLHI	Chlorpyrifos (Dursban)	0.1	0.10	UGL	100.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	108.500	108.000	UGL	0.5	(0-20)
LCS1	Endrin Aldehyde	2	2.24	UGL	112.0	(70-130)
LCS2	Endrin Aldehyde	2	2.28	UGL	114.0	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MRLHI	Endrin Aldehyde	0.1	0.13	UGL	130.0	(50-150)
MS	Endrin Aldehyde	2	2.31	UGL	115.5	(70-130)
LCS1	Endrin	2	2.01	UGL	100.5	(70-130)
LCS2	Endrin	2	1.88	UGL	94.0	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MRLHI	Endrin	0.1	0.060	UGL	60.0	(50-150)
MS	Endrin	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Endrin	100.500	94.000	UGL	6.7	(0-20)
LCS1	EPTC	2	2.18	UGL	109.0	(70-130)
LCS2	EPTC	2	2.17	UGL	108.5	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MRLHI	EPTC	0.1	0.11	UGL	110.0	(50-150)
MS	EPTC	2	2.21	UGL	110.5	(70-130)
RPD_LCS	EPTC	109.000	108.500	UGL	0.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	2.25	UGL	112.5	(70-130)
LCS2	Endosulfan I (Alpha)	2	2.33	UGL	116.5	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MRLHI	Endosulfan I (Alpha)	0.1	0.14	UGL	140.0	(50-150)
MS	Endosulfan I (Alpha)	2	2.36	UGL	118.0	(70-130)

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LCS1	Endosulfan II (Beta)	2	2.19	UGL	109.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.21	UGL	110.5	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MRLHI	Endosulfan II (Beta)	0.1	0.13	UGL	130.0	(50-150)
MS	Endosulfan II (Beta)	2	2.19	UGL	109.5	(70-130)
LCS1	Endosulfan Sulfate	2	2.31	UGL	115.5	(70-130)
LCS2	Endosulfan Sulfate	2	2.28	UGL	114.0	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MRLHI	Endosulfan Sulfate	0.1	0.080	UGL	80.0	(50-150)
MS	Endosulfan Sulfate	2	2.26	UGL	113.0	(70-130)
LCS1	Fluoranthene	2	2.27	UGL	113.5	(70-130)
LCS2	Fluoranthene	2	2.24	UGL	112.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MRLHI	Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Fluoranthene	2	2.23	UGL	111.5	(70-130)
RPD_LCS	Fluoranthene	113.500	112.000	UGL	1.3	(0-20)
LCS1	Fluorene	2	2.17	UGL	108.5	(70-130)
LCS2	Fluorene	2	2.07	UGL	103.5	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MRLHI	Fluorene	0.1	0.10	UGL	100.0	(50-150)
MS	Fluorene	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Fluorene	108.500	103.500	UGL	4.7	(0-20)
LCS1	gamma-Chlordane	2	2.20	UGL	110.0	(70-130)
LCS2	gamma-Chlordane	2	2.12	UGL	106.0	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLHI	gamma-Chlordane	0.1	0.10	UGL	100.0	(50-150)
MS	gamma-Chlordane	2	2.13	UGL	106.5	(70-130)
RPD_LCS	gamma-Chlordane	110.000	106.000	UGL	3.7	(0-20)
LCS1	Hexachlorobenzene	2	2.17	UGL	108.5	(70-130)
LCS2	Hexachlorobenzene	2	2.18	UGL	109.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MRLHI	Hexachlorobenzene	0.3	0.32	UGL	106.7	(50-150)
MS	Hexachlorobenzene	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Hexachlorobenzene	108.500	109.000	UGL	0.5	(0-20)
LCS1	Hexachlorocyclopentadiene	2	1.90	UGL	95.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	1.84	UGL	92.0	(70-130)

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MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLHI	Hexachlorocyclopentadiene	0.3	0.26	UGL	86.7	(50-150)
MS	Hexachlorocyclopentadiene	2	1.84	UGL	92.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	95.000	92.000	UGL	3.2	(0-20)
LCS1	Heptachlor	2	2.02	UGL	101.0	(70-130)
LCS2	Heptachlor	2	2.06	UGL	103.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLHI	Heptachlor	0.1	0.090	UGL	90.0	(50-150)
MS	Heptachlor	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Heptachlor	101.000	103.000	UGL	2.0	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.24	UGL	112.0	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	2.28	UGL	114.0	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLHI	Heptachlor Epoxide (isomer B)	0.1	0.11	UGL	110.0	(50-150)
MS	Heptachlor Epoxide (isomer B)	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	112.000	114.000	UGL	1.8	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MRLHI	Indeno(1,2,3,c,d)Pyrene	0.1	0.10	UGL	100.0	(50-150)
MS	Indeno(1,2,3,c,d)Pyrene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	110.500	105.000	UGL	5.1	(0-20)
LCS1	Isophorone	2	2.13	UGL	106.5	(70-130)
LCS2	Isophorone	2	2.16	UGL	108.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MRLHI	Isophorone	0.1	0.12	UGL	120.0	(50-150)
MS	Isophorone	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Isophorone	106.500	108.000	UGL	1.4	(0-20)
LCS1	Lindane	2	2.00	UGL	100.0	(70-130)
LCS2	Lindane	2	1.95	UGL	97.5	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLHI	Lindane	0.1	0.12	UGL	120.0	(50-150)
MS	Lindane	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Lindane	100.000	97.500	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.22	UGL	111.0	(70-130)
LCS2	Methoxychlor	2	2.20	UGL	110.0	(70-130)

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MBLK	Methoxychlor	ND	<0.1	UGL		
MRLHI	Methoxychlor	0.1	0.070	UGL	70.0	(50-150)
MS	Methoxychlor	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Methoxychlor	111.000	110.000	UGL	0.9	(0-20)
LCS1	Metribuzin	2	2.17	UGL	108.5	(70-130)
LCS2	Metribuzin	2	2.16	UGL	108.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLHI	Metribuzin	0.1	0.090	UGL	90.0	(50-150)
MS	Metribuzin	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Metribuzin	108.500	108.000	UGL	0.5	(0-20)
LCS1	Malathion	2	2.32	UGL	116.0	(70-130)
LCS2	Malathion	2	2.33	UGL	116.5	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MRLHI	Malathion	0.1	0.10	UGL	100.0	(50-150)
MS	Malathion	2	2.37	UGL	118.5	(70-130)
RPD_LCS	Malathion	116.000	116.500	UGL	0.4	(0-20)
LCS1	Molinate	2	2.23	UGL	111.5	(70-130)
LCS2	Molinate	2	2.26	UGL	113.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MRLHI	Molinate	0.1	0.10	UGL	100.0	(50-150)
MS	Molinate	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Molinate	111.500	113.000	UGL	1.3	(0-20)
LCS1	Metolachlor	2	2.33	UGL	116.5	(70-130)
LCS2	Metolachlor	2	2.28	UGL	114.0	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLHI	Metolachlor	0.1	0.11	UGL	110.0	(50-150)
MS	Metolachlor	2	2.34	UGL	117.0	(70-130)
RPD_LCS	Metolachlor	116.500	114.000	UGL	2.2	(0-20)
LCS1	Naphthalene	2	2.10	UGL	105.0	(70-130)
LCS2	Naphthalene	2	2.10	UGL	105.0	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MRLHI	Naphthalene	0.1	0.10	UGL	100.0	(50-150)
MS	Naphthalene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Naphthalene	105.000	105.000	UGL	0.0	(0-20)
LCS1	trans-Nonachlor	2	2.23	UGL	111.5	(70-130)
LCS2	trans-Nonachlor	2	2.25	UGL	112.5	(70-130)

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MBLK	trans-Nonachlor	ND	<0.05	UGL		
MRLHI	trans-Nonachlor	0.1	0.10	UGL	100.0	(50-150)
MS	trans-Nonachlor	2	2.09	UGL	104.5	(70-130)
RPD_LCS	trans-Nonachlor	111.500	112.500	UGL	0.9	(0-20)
LCS1	Pentachlorophenol	8	6.37	UGL	79.6	(70-130)
LCS2	Pentachlorophenol	8	5.72	UGL	71.5	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MRLHI	Pentachlorophenol	1.2	0.79	UGL	65.8	(50-150)
MS	Pentachlorophenol	8	7.76	UGL	97.0	(70-130)
RPD_LCS	Pentachlorophenol	79.625	71.500	UGL	10.8	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.58	UGL	114.5	(70-130)
LCS2	Permethrin (mixed isomers)	4	4.40	UGL	110.0	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MRLHI	Permethrin (mixed isomers)	0.2	0.13	UGL	65.0	(50-150)
MS	Permethrin (mixed isomers)	4	4.45	UGL	111.2	(70-130)
RPD_LCS	Permethrin (mixed isomers)	114.500	110.000	UGL	4.0	(0-20)
LCS1	Phenanthrene	2	2.10	UGL	105.0	(70-130)
LCS2	Phenanthrene	2	2.09	UGL	104.5	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLHI	Phenanthrene	0.1	0.10	UGL	100.0	(50-150)
MS	Phenanthrene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Phenanthrene	105.000	104.500	UGL	0.5	(0-20)
LCS1	Propachlor	2	2.07	UGL	103.5	(70-130)
LCS2	Propachlor	2	1.97	UGL	98.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLHI	Propachlor	0.1	0.12	UGL	120.0	(50-150)
MS	Propachlor	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Propachlor	103.500	98.500	UGL	5.0	(0-20)
LCS1	Parathion	2	2.35	UGL	117.5	(70-130)
LCS2	Parathion	2	2.21	UGL	110.5	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MRLHI	Parathion	0.1	0.080	UGL	80.0	(50-150)
MS	Parathion	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Parathion	117.500	110.500	UGL	6.1	(0-20)
LCS1	Pyrene	2	2.26	UGL	113.0	(70-130)
LCS2	Pyrene	2	2.23	UGL	111.5	(70-130)

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MBLK	Pyrene	ND	<0.05	UGL		
MRLHI	Pyrene	0.1	0.10	UGL	100.0	(50-150)
MS	Pyrene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Pyrene	113.000	111.500	UGL	1.3	(0-20)
LCS1	Simazine	2	2.02	UGL	101.0	(70-130)
LCS2	Simazine	2	2.00	UGL	100.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MRLHI	Simazine	0.1	0.10	UGL	100.0	(50-150)
MS	Simazine	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Simazine	101.000	100.000	UGL	1.0	(0-20)
LCS1	Perylene-d12	100	96	%R	96.0	(70-130)
LCS2	Perylene-d12	100	93	%R	93.0	(70-130)
MBLK	Perylene-d12	100	78	%R	78.0	
MRLHI	Perylene-d12	100	86	%R	86.0	(70-130)
MS	Perylene-d12	100	96	%R	96.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	102	%R	102.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	103	%R	103.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	
MRLHI	1,3-dimethyl-2-nitrobenzene	100	102	%R	102.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	104	%R	104.0	(70-130)
LCS1	Triphenylphosphate	100	109	%R	109.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	107	%R	107.0	
MRLHI	Triphenylphosphate	100	101	%R	101.0	(70-130)
MS	Triphenylphosphate	100	108	%R	108.0	(70-130)
LCS1	Thiobencarb (ELAP Cert)	2	2.24	UGL	112.0	(70-130)
LCS2	Thiobencarb (ELAP Cert)	2	2.27	UGL	113.5	(70-130)
MBLK	Thiobencarb (ELAP Cert)	ND	<0.2	UGL		
MRLHI	Thiobencarb (ELAP Cert)	0.1	0.11	UGL	110.0	(50-150)
MS	Thiobencarb (ELAP Cert)	2	2.31	UGL	115.5	(70-130)
RPD_LCS	Thiobencarb (ELAP Cert)	112.000	113.500	UGL	1.3	(0-20)
LCS1	Terbacil	2	2.15	UGL	107.5	(70-130)
LCS2	Terbacil	2	2.15	UGL	107.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MRLHI	Terbacil	0.1	0.090	UGL	90.0	(50-150)
MS	Terbacil	2	2.17	UGL	108.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD_LCS	Terbacil	107.500	107.500	UGL	0.0	(0-20)
LCS1	Trifluralin	2	2.30	UGL	115.0	(70-130)
LCS2	Trifluralin	2	2.29	UGL	114.5	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MRLHI	Trifluralin	0.1	0.10	UGL	100.0	(50-150)
MS	Trifluralin	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Trifluralin	115.000	114.500	UGL	0.4	(0-20)

QC Ref #438711 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.82	UGL	91.0	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.73	UGL	86.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	91.500	91.000	UGL	0.5	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.85	UGL	92.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.89	UGL	94.5	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.77	UGL	88.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	92.500	94.500	UGL	2.1	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	1.92	UGL	96.0	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			
MS	Alpha-BHC	2	1.91	UGL	95.5	(70-130)	
LCS1	alpha-Chlordane	2	1.87	UGL	93.5	(70-130)	
LCS2	alpha-Chlordane	2	1.94	UGL	97.0	(70-130)	
MBLK	alpha-Chlordane	ND	<0.05	UGL			
MS	alpha-Chlordane	2	1.90	UGL	95.0	(70-130)	
RPD_LCS	alpha-Chlordane	93.500	97.000	UGL	3.7	(0-20)	
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)	
LCS2	Diazinon (Qualitative)	2	1.96	UGL	98.0	(70-130)	
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL			
MS	Diazinon (Qualitative)	2	1.99	UGL	99.5	(70-130)	
RPD_LCS	Diazinon (Qualitative)	101.000	98.000	UGL	3.0	(0-20)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MS	Spiked sample	Lab # 28	06210039	NONE		(0-0)
LCS1	Acenaphthene	2	1.89	UGL	94.5	(70-130)
LCS2	Acenaphthene	2	1.93	UGL	96.5	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Acenaphthene	94.500	96.500	UGL	2.1	(0-20)
LCS1	Acenaphthylene	2	1.96	UGL	98.0	(70-130)
LCS2	Acenaphthylene	2	1.91	UGL	95.5	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Acenaphthylene	98.000	95.500	UGL	2.6	(0-20)
LCS1	Acetochlor	2	2.08	UGL	104.0	(70-130)
LCS2	Acetochlor	2	2.16	UGL	108.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Acetochlor	104.000	108.000	UGL	3.8	(0-20)
LCS1	Alachlor	2	2.05	UGL	102.5	(70-130)
LCS2	Alachlor	2	2.14	UGL	107.0	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Alachlor	102.500	107.000	UGL	4.3	(0-20)
LCS1	Aldrin	2	1.63	UGL	81.5	(70-130)
LCS2	Aldrin	2	1.66	UGL	83.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.80	UGL	90.0	(70-130)
RPD_LCS	Aldrin	81.500	83.000	UGL	1.8	(0-20)
LCS1	Anthracene	2	1.87	UGL	93.5	(70-130)
LCS2	Anthracene	2	1.91	UGL	95.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Anthracene	93.500	95.500	UGL	2.1	(0-20)
LCS1	Atrazine	2	2.14	UGL	107.0	(70-130)
LCS2	Atrazine	2	2.16	UGL	108.0	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.04	UGL	102.0	(70-130)

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Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD_LCS	Atrazine	107.000	108.000	UGL	0.9	(0-20)
LCS1	Benz(a)Anthracene	2	1.83	UGL	91.5	(70-130)
LCS2	Benz(a)Anthracene	2	1.92	UGL	96.0	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	1.85	UGL	92.5	(70-130)
RPD_LCS	Benz(a)Anthracene	91.500	96.000	UGL	4.8	(0-20)
LCS1	Benzo(a)pyrene	2	2.06	UGL	103.0	(70-130)
LCS2	Benzo(a)pyrene	2	1.99	UGL	99.5	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Benzo(a)pyrene	103.000	99.500	UGL	3.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.16	UGL	108.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.04	UGL	102.0	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	108.000	102.000	UGL	5.7	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	2.04	UGL	102.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	2.09	UGL	104.5	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	102.000	104.500	UGL	2.4	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.99	UGL	99.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	2.11	UGL	105.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	99.500	105.500	UGL	5.9	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	2.19	UGL	109.5	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	2.28	UGL	114.0	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	109.500	114.000	UGL	4.0	(0-20)
LCS1	Beta-BHC	2	1.97	UGL	98.5	(70-130)
LCS2	Beta-BHC	2	1.96	UGL	98.0	(70-130)

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MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	1.95	UGL	97.5	(70-130)
LCS1	Butylbenzylphthalate	2	2.03	UGL	101.5	(70-130)
LCS2	Butylbenzylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Butylbenzylphthalate	101.500	106.500	UGL	4.8	(0-20)
LCS1	Bromacil	2	1.99	UGL	99.5	(70-130)
LCS2	Bromacil	2	2.12	UGL	106.0	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Bromacil	99.500	106.000	UGL	6.3	(0-20)
LCS1	Butachlor	2	2.01	UGL	100.5	(70-130)
LCS2	Butachlor	2	2.14	UGL	107.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Butachlor	100.500	107.000	UGL	6.3	(0-20)
LCS1	Caffeine by method 525mod	2	1.76	UGL	88.0	(45-137)
LCS2	Caffeine by method 525mod	2	1.78	UGL	89.0	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MS	Caffeine by method 525mod	2	1.75	UGL	87.5	(46-144)
RPD_LCS	Caffeine by method 525mod	88.000	89.000	UGL	1.1	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.06	UGL	103.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.99	UGL	99.5	(70-130)
LCS2	Chrysene	2	1.96	UGL	98.0	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Chrysene	99.500	98.000	UGL	1.5	(0-20)
LCS1	Chlorobenzilate	2	2.01	UGL	100.5	(70-130)
LCS2	Chlorobenzilate	2	2.14	UGL	107.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	Chlorobenzilate	100.500	107.000	UGL	6.3	(0-20)
LCS1	Chloroneb	2	2.04	UGL	102.0	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Chloroneb	102.000	102.500	UGL	0.5	(0-20)
LCS1	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS2	Delta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	1.97	UGL	98.5	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	1.99	UGL	99.5	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.11	UGL	105.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	1.84	UGL	92.0	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	99.500	105.500	UGL	5.9	(0-20)
LCS1	4,4'-DDD	2	1.98	UGL	99.0	(70-130)
LCS2	4,4'-DDD	2	2.11	UGL	105.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
RPD_LCS	4,4'-DDD	99.000	105.500	UGL	6.4	(0-20)
LCS1	4,4'-DDE	2	1.85	UGL	92.5	(70-130)
LCS2	4,4'-DDE	2	1.98	UGL	99.0	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.85	UGL	92.5	(70-130)
RPD_LCS	4,4'-DDE	92.500	99.000	UGL	6.8	(0-20)
LCS1	4,4'-DDT	2	1.93	UGL	96.5	(70-130)
LCS2	4,4'-DDT	2	2.09	UGL	104.5	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	2.03	UGL	101.5	(70-130)
RPD_LCS	4,4'-DDT	96.500	104.500	UGL	8.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.08	UGL	104.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.11	UGL	105.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	104.000	105.500	UGL	1.4	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.01	UGL	100.5	(70-130)

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LCS2	Di-(2-Ethylhexyl)adipate	2	2.20	UGL	110.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	100.500	110.000	UGL	9.0	(0-20)
LCS1	Diethylphthalate	2	2.24	UGL	112.0	(70-130)
LCS2	Diethylphthalate	2	2.20	UGL	110.0	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Diethylphthalate	112.000	110.000	UGL	1.8	(0-20)
LCS1	Dieldrin	2	2.12	UGL	106.0	(70-130)
LCS2	Dieldrin	2	2.13	UGL	106.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dieldrin	106.000	106.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.21	UGL	110.5	(70-130)
LCS2	Dimethylphthalate	2	2.21	UGL	110.5	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Dimethylphthalate	110.500	110.500	UGL	0.0	(0-20)
LCS1	Dimethoate	2	1.47	UGL	73.5	(35-100)
LCS2	Dimethoate	2	1.44	UGL	72.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.32	UGL	66.0	(34-111)
RPD_LCS	Dimethoate	73.500	72.000	UGL	2.1	(0-20)
LCS1	Di-n-Butylphthalate	4	4.14	UGL	103.5	(70-130)
LCS2	Di-n-Butylphthalate	4	4.29	UGL	107.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	4.29	UGL	107.2	(70-130)
RPD_LCS	Di-n-Butylphthalate	103.500	107.250	UGL	3.6	(0-20)
LCS1	Di-N-octylphthalate	2	1.95	UGL	97.5	(70-130)
LCS2	Di-N-octylphthalate	2	1.98	UGL	99.0	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Di-N-octylphthalate	97.500	99.000	UGL	1.5	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.03	UGL	101.5	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.09	UGL	104.5	(70-130)

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Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	101.500	104.500	UGL	2.9	(0-20)
LCS1	Endrin Aldehyde	2	1.77	UGL	88.5	(70-130)
LCS2	Endrin Aldehyde	2	1.85	UGL	92.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.74	UGL	87.0	(70-130)
LCS1	Endrin	2	1.89	UGL	94.5	(70-130)
LCS2	Endrin	2	1.91	UGL	95.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Endrin	94.500	95.500	UGL	1.1	(0-20)
LCS1	EPTC	2	2.12	UGL	106.0	(70-130)
LCS2	EPTC	2	2.16	UGL	108.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.13	UGL	106.5	(70-130)
RPD_LCS	EPTC	106.000	108.000	UGL	1.9	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.72	UGL	86.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.88	UGL	94.0	(70-130)
LCS1	Endosulfan II (Beta)	2	1.88	UGL	94.0	(70-130)
LCS2	Endosulfan II (Beta)	2	1.97	UGL	98.5	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.91	UGL	95.5	(70-130)
LCS1	Endosulfan Sulfate	2	1.95	UGL	97.5	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.95	UGL	97.5	(70-130)
LCS1	Fluoranthene	2	2.05	UGL	102.5	(70-130)
LCS2	Fluoranthene	2	2.12	UGL	106.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Fluoranthene	102.500	106.000	UGL	3.4	(0-20)
LCS1	Fluorene	2	2.07	UGL	103.5	(70-130)
LCS2	Fluorene	2	2.02	UGL	101.0	(70-130)

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MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Fluorene	103.500	101.000	UGL	2.4	(0-20)
LCS1	gamma-Chlordane	2	1.95	UGL	97.5	(70-130)
LCS2	gamma-Chlordane	2	2.10	UGL	105.0	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	1.97	UGL	98.5	(70-130)
RPD_LCS	gamma-Chlordane	97.500	105.000	UGL	7.4	(0-20)
LCS1	Hexachlorobenzene	2	1.94	UGL	97.0	(70-130)
LCS2	Hexachlorobenzene	2	1.93	UGL	96.5	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	1.85	UGL	92.5	(70-130)
RPD_LCS	Hexachlorobenzene	97.000	96.500	UGL	0.5	(0-20)
LCS1	Hexachlorocyclopentadiene	2	1.91	UGL	95.5	(70-130)
LCS2	Hexachlorocyclopentadiene	2	1.93	UGL	96.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	95.500	96.500	UGL	1.0	(0-20)
LCS1	Heptachlor	2	1.98	UGL	99.0	(70-130)
LCS2	Heptachlor	2	2.12	UGL	106.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.020	UGL	100.0	(50-150)
MS	Heptachlor	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Heptachlor	99.000	106.000	UGL	6.8	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.02	UGL	101.0	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	2.11	UGL	105.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	101.000	105.500	UGL	4.4	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.01	UGL	100.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.08	UGL	104.0	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	100.500	104.000	UGL	3.4	(0-20)
LCS1	Isophorone	2	1.90	UGL	95.0	(70-130)
LCS2	Isophorone	2	1.96	UGL	98.0	(70-130)

MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Isophorone	95.000	98.000	UGL	3.1	(0-20)
LCS1	Lindane	2	1.92	UGL	96.0	(70-130)
LCS2	Lindane	2	1.94	UGL	97.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.020	UGL	100.0	(50-150)
MS	Lindane	2	1.86	UGL	93.0	(70-130)
RPD_LCS	Lindane	96.000	97.000	UGL	1.0	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	1.99	UGL	99.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Methoxychlor	105.500	99.500	UGL	5.9	(0-20)
LCS1	Metribuzin	2	2.05	UGL	102.5	(70-130)
LCS2	Metribuzin	2	2.12	UGL	106.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Metribuzin	102.500	106.000	UGL	3.4	(0-20)
LCS1	Malathion	2	2.12	UGL	106.0	(70-130)
LCS2	Malathion	2	2.24	UGL	112.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Malathion	106.000	112.000	UGL	5.5	(0-20)
LCS1	Molinate	2	2.07	UGL	103.5	(70-130)
LCS2	Molinate	2	2.11	UGL	105.5	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Molinate	103.500	105.500	UGL	1.9	(0-20)
LCS1	Metolachlor	2	2.06	UGL	103.0	(70-130)
LCS2	Metolachlor	2	2.17	UGL	108.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Metolachlor	103.000	108.500	UGL	5.2	(0-20)
LCS1	Naphthalene	2	1.88	UGL	94.0	(70-130)
LCS2	Naphthalene	2	1.88	UGL	94.0	(70-130)

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MBLK	Naphthalene	ND	<0.3	UGL		
MS	Naphthalene	2	1.94	UGL	97.0	(70-130)
RPD_LCS	Naphthalene	94.000	94.000	UGL	0.0	(0-20)
LCS1	trans-Nonachlor	2	1.80	UGL	90.0	(70-130)
LCS2	trans-Nonachlor	2	1.98	UGL	99.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	1.92	UGL	96.0	(70-130)
RPD_LCS	trans-Nonachlor	90.000	99.000	UGL	9.5	(0-20)
LCS1	Pentachlorophenol	8	8.68	UGL	108.5	(70-130)
LCS2	Pentachlorophenol	8	8.79	UGL	109.9	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.53	UGL	106.6	(70-130)
RPD_LCS	Pentachlorophenol	108.500	109.875	UGL	1.3	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.05	UGL	101.2	(70-130)
LCS2	Permethrin (mixed isomers)	4	4.05	UGL	101.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.94	UGL	98.5	(70-130)
RPD_LCS	Permethrin (mixed isomers)	101.250	101.250	UGL	0.0	(0-20)
LCS1	Phenanthrene	2	1.94	UGL	97.0	(70-130)
LCS2	Phenanthrene	2	1.96	UGL	98.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.94	UGL	97.0	(70-130)
RPD_LCS	Phenanthrene	97.000	98.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Propachlor	2	2.08	UGL	104.0	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Propachlor	106.000	104.000	UGL	1.9	(0-20)
LCS1	Parathion	2	2.02	UGL	101.0	(70-130)
LCS2	Parathion	2	2.15	UGL	107.5	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Parathion	101.000	107.500	UGL	6.2	(0-20)
LCS1	Pyrene	2	1.98	UGL	99.0	(70-130)
LCS2	Pyrene	2	2.03	UGL	101.5	(70-130)

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MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Pyrene	99.000	101.500	UGL	2.5	(0-20)
LCS1	Simazine	2	2.22	UGL	111.0	(70-130)
LCS2	Simazine	2	2.18	UGL	109.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Simazine	111.000	109.000	UGL	1.8	(0-20)
LCS1	Perylene-d12	100	90	%R	90.0	(70-130)
LCS2	Perylene-d12	100	91	%R	91.0	(70-130)
MBLK	Perylene-d12	100	77	%R	77.0	
MRLLW	Perylene-d12	100	82	%R	82.0	(70-130)
MS	Perylene-d12	100	88	%R	88.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	100	%R	100.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	99	%R	99.0	(70-130)
LCS1	Triphenylphosphate	100	96	%R	96.0	(70-130)
LCS2	Triphenylphosphate	100	100	%R	100.0	(70-130)
MBLK	Triphenylphosphate	100	96	%R	96.0	
MRLLW	Triphenylphosphate	100	93	%R	93.0	(70-130)
MS	Triphenylphosphate	100	102	%R	102.0	(70-130)
LCS1	Thiobencarb (ELAP Cert)	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb (ELAP Cert)	2	2.20	UGL	110.0	(70-130)
MBLK	Thiobencarb (ELAP Cert)	ND	<0.2	UGL		
MS	Thiobencarb (ELAP Cert)	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Thiobencarb (ELAP Cert)	105.000	110.000	UGL	4.7	(0-20)
LCS1	Terbacil	2	2.31	UGL	115.5	(70-130)
LCS2	Terbacil	2	2.27	UGL	113.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Terbacil	115.500	113.500	UGL	1.7	(0-20)
LCS1	Trifluralin	2	2.14	UGL	107.0	(70-130)
LCS2	Trifluralin	2	2.02	UGL	101.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		

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MS	Trifluralin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Trifluralin	107.000	101.000	UGL	5.8	(0-20)

QC Ref #438722 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.75	UGL	87.5	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.70	UGL	85.0	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	87.500	91.500	UGL	4.5	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.75	UGL	87.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.75	UGL	87.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	87.500	91.500	UGL	4.5	(0-20)	
LCS1	Alpha-BHC	2	2.02	UGL	101.0	(70-130)	
LCS2	Alpha-BHC	2	2.00	UGL	100.0	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			
MS	Alpha-BHC	2	2.05	UGL	102.5	(70-130)	
LCS1	alpha-Chlordane	2	1.92	UGL	96.0	(70-130)	
LCS2	alpha-Chlordane	2	1.97	UGL	98.5	(70-130)	
MBLK	alpha-Chlordane	ND	<0.05	UGL			
MRLMD	alpha-Chlordane	0.05	0.050	UGL	100.0	(50-150)	
MS	alpha-Chlordane	2	1.98	UGL	99.0	(70-130)	
RPD_LCS	alpha-Chlordane	96.000	98.500	UGL	2.6	(0-20)	
LCS1	Diazinon (Qualitative)	2	1.92	UGL	96.0	(70-130)	
LCS2	Diazinon (Qualitative)	2	1.87	UGL	93.5	(70-130)	
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL			
MS	Diazinon (Qualitative)	2	1.67	UGL	83.5	(70-130)	
RPD_LCS	Diazinon (Qualitative)	96.000	93.500	UGL	2.6	(0-20)	
MS	Spiked sample	Lab # 28	06240123	NONE		(0-0)	
LCS1	Acenaphthene	2	1.98	UGL	99.0	(70-130)	
LCS2	Acenaphthene	2	1.97	UGL	98.5	(70-130)	
MBLK	Acenaphthene	ND	<0.1	UGL			

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MS	Acenaphthene	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Acenaphthene	99.000	98.500	UGL	0.5	(0-20)
LCS1	Acenaphthylene	2	1.86	UGL	93.0	(70-130)
LCS2	Acenaphthylene	2	1.90	UGL	95.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.85	UGL	92.5	(70-130)
RPD_LCS	Acenaphthylene	93.000	95.000	UGL	2.1	(0-20)
LCS1	Acetochlor	2	1.89	UGL	94.5	(70-130)
LCS2	Acetochlor	2	1.94	UGL	97.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acetochlor	94.500	97.000	UGL	2.6	(0-20)
LCS1	Alachlor	2	1.92	UGL	96.0	(70-130)
LCS2	Alachlor	2	1.83	UGL	91.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLMD	Alachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Alachlor	2	1.92	UGL	96.0	(70-130)
RPD_LCS	Alachlor	96.000	91.500	UGL	4.8	(0-20)
LCS1	Aldrin	2	1.57	UGL	78.5	(70-130)
LCS2	Aldrin	2	1.60	UGL	80.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MRLMD	Aldrin	0.05	0.050	UGL	100.0	(50-150)
MS	Aldrin	2	1.73	UGL	86.5	(70-130)
RPD_LCS	Aldrin	78.500	80.000	UGL	1.9	(0-20)
LCS1	Anthracene	2	1.83	UGL	91.5	(70-130)
LCS2	Anthracene	2	1.83	UGL	91.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLMD	Anthracene	0.05	0.050	UGL	100.0	(50-150)
MS	Anthracene	2	0.38	UGL	19.0	(70-130)
RPD_LCS	Anthracene	91.500	91.500	UGL	0.0	(0-20)
LCS1	Atrazine	2	2.04	UGL	102.0	(70-130)
LCS2	Atrazine	2	1.96	UGL	98.0	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MRLMD	Atrazine	0.05	0.060	UGL	120.0	(50-150)
MS	Atrazine	2	1.84	UGL	92.0	(70-130)
RPD_LCS	Atrazine	102.000	98.000	UGL	4.0	(0-20)

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LCS1	Benz(a)Anthracene	2	1.80	UGL	90.0	(70-130)
LCS2	Benz(a)Anthracene	2	1.83	UGL	91.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLMD	Benz(a)Anthracene	0.05	0.050	UGL	100.0	(50-150)
MS	Benz(a)Anthracene	2	1.35	UGL	67.5	(70-130)
RPD_LCS	Benz(a)Anthracene	90.000	91.500	UGL	1.7	(0-20)
LCS1	Benzo(a)pyrene	2	1.87	UGL	93.5	(70-130)
LCS2	Benzo(a)pyrene	2	1.83	UGL	91.5	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLMD	Benzo(a)pyrene	0.05	0.040	UGL	80.0	(50-150)
MS	Benzo(a)pyrene	2	1.06	UGL	53.0	(70-130)
RPD_LCS	Benzo(a)pyrene	93.500	91.500	UGL	2.2	(0-20)
LCS1	Benzo(b)Fluoranthene	2	1.95	UGL	97.5	(70-130)
LCS2	Benzo(b)Fluoranthene	2	1.90	UGL	95.0	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLMD	Benzo(b)Fluoranthene	0.05	0.050	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	97.500	95.000	UGL	2.6	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.82	UGL	91.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLMD	Benzo(g,h,i)Perylene	0.05	0.050	UGL	100.0	(50-150)
MS	Benzo(g,h,i)Perylene	2	1.74	UGL	87.0	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	97.000	91.000	UGL	6.4	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.90	UGL	95.0	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.85	UGL	92.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLMD	Benzo(k)Fluoranthene	0.05	0.040	UGL	80.0	(50-150)
MS	Benzo(k)Fluoranthene	2	1.91	UGL	95.5	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	95.000	92.500	UGL	2.7	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.79	UGL	89.5	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.75	UGL	87.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.76	UGL	88.0	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	89.500	87.500	UGL	2.3	(0-20)
LCS1	Beta-BHC	2	2.05	UGL	102.5	(70-130)

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LCS2	Beta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	1.99	UGL	99.5	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.09	UGL	104.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.500	UGL	1.4	(0-20)
LCS1	Bromacil	2	2.18	UGL	109.0	(70-130)
LCS2	Bromacil	2	2.15	UGL	107.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Bromacil	109.000	107.500	UGL	1.4	(0-20)
LCS1	Butachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Butachlor	2	2.13	UGL	106.5	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLMD	Butachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Butachlor	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Butachlor	106.000	106.500	UGL	0.5	(0-20)
LCS1	Caffeine by method 525mod	2	1.49	UGL	74.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.60	UGL	80.0	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MRLMD	Caffeine by method 525mod	0.05	0.040	UGL	80.0	(50-150)
MS	Caffeine by method 525mod	2	1.31	UGL	65.5	(46-144)
RPD_LCS	Caffeine by method 525mod	74.500	80.000	UGL	7.1	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	1.92	UGL	96.0	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.01	UGL	100.5	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MS	Chlorothalonil(Draconil,Bravo)	2	1.96	UGL	98.0	(70-130)
LCS1	Chrysene	2	1.97	UGL	98.5	(70-130)
LCS2	Chrysene	2	1.95	UGL	97.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLMD	Chrysene	0.05	0.050	UGL	100.0	(50-150)
MS	Chrysene	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Chrysene	98.500	97.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.03	UGL	101.5	(70-130)

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LCS2	Chlorobenzilate	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Chlorobenzilate	101.500	102.500	UGL	1.0	(0-20)
LCS1	Chloroneb	2	1.93	UGL	96.5	(70-130)
LCS2	Chloroneb	2	1.91	UGL	95.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Chloroneb	96.500	95.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.04	UGL	102.0	(70-130)
LCS2	Delta-BHC	2	2.01	UGL	100.5	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	1.92	UGL	96.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	1.89	UGL	94.5	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	1.79	UGL	89.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLMD	Dibenz(a,h)Anthracene	0.05	0.050	UGL	100.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	1.67	UGL	83.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	94.500	89.500	UGL	5.4	(0-20)
LCS1	4,4'-DDD	2	1.93	UGL	96.5	(70-130)
LCS2	4,4'-DDD	2	1.97	UGL	98.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	1.94	UGL	97.0	(70-130)
RPD_LCS	4,4'-DDD	96.500	98.500	UGL	2.1	(0-20)
LCS1	4,4'-DDE	2	1.83	UGL	91.5	(70-130)
LCS2	4,4'-DDE	2	1.87	UGL	93.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.81	UGL	90.5	(70-130)
RPD_LCS	4,4'-DDE	91.500	93.500	UGL	2.2	(0-20)
LCS1	4,4'-DDT	2	1.87	UGL	93.5	(70-130)
LCS2	4,4'-DDT	2	1.88	UGL	94.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.85	UGL	92.5	(70-130)
RPD_LCS	4,4'-DDT	93.500	94.000	UGL	0.5	(0-20)
LCS1	Dichlorvos (DDVP)	2	1.98	UGL	99.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.01	UGL	100.5	(70-130)

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MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLMD	Dichlorvos (DDVP)	0.05	0.060	UGL	120.0	(50-150)
MS	Dichlorvos (DDVP)	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Dichlorvos (DDVP)	99.000	100.500	UGL	1.5	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	1.91	UGL	95.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.91	UGL	95.5	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.86	UGL	93.0	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	95.500	95.500	UGL	0.0	(0-20)
LCS1	Diethylphthalate	2	2.03	UGL	101.5	(70-130)
LCS2	Diethylphthalate	2	2.01	UGL	100.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Diethylphthalate	101.500	100.500	UGL	1.0	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.04	UGL	102.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dieldrin	101.000	102.000	UGL	1.0	(0-20)
LCS1	Dimethylphthalate	2	2.01	UGL	100.5	(70-130)
LCS2	Dimethylphthalate	2	2.02	UGL	101.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Dimethylphthalate	100.500	101.000	UGL	0.5	(0-20)
LCS1	Dimethoate	2	1.40	UGL	70.0	(35-100)
LCS2	Dimethoate	2	1.46	UGL	73.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.14	UGL	57.0	(34-111)
RPD_LCS	Dimethoate	70.000	73.000	UGL	4.2	(0-20)
LCS1	Di-n-Butylphthalate	4	4.29	UGL	107.2	(70-130)
LCS2	Di-n-Butylphthalate	4	4.33	UGL	108.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	4.51	UGL	112.8	(70-130)
RPD_LCS	Di-n-Butylphthalate	107.250	108.250	UGL	0.9	(0-20)
LCS1	Di-N-octylphthalate	2	1.86	UGL	93.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.75	UGL	87.5	(70-130)

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MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.64	UGL	82.0	(70-130)
RPD_LCS	Di-N-octylphthalate	93.000	87.500	UGL	6.1	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	1.92	UGL	96.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	1.96	UGL	98.0	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLMD	Chlorpyrifos (Dursban)	0.05	0.070	UGL	140.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.02	UGL	101.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	96.000	98.000	UGL	2.1	(0-20)
LCS1	Endrin Aldehyde	2	1.97	UGL	98.5	(70-130)
LCS2	Endrin Aldehyde	2	2.00	UGL	100.0	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS1	Endrin	2	1.82	UGL	91.0	(70-130)
LCS2	Endrin	2	1.95	UGL	97.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Endrin	91.000	97.500	UGL	6.9	(0-20)
LCS1	EPTC	2	1.92	UGL	96.0	(70-130)
LCS2	EPTC	2	1.97	UGL	98.5	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.06	UGL	103.0	(70-130)
RPD_LCS	EPTC	96.000	98.500	UGL	2.6	(0-20)
LCS1	Endosulfan I (Alpha)	2	2.14	UGL	107.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.97	UGL	98.5	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	2.25	UGL	112.5	(70-130)
LCS1	Endosulfan II (Beta)	2	1.97	UGL	98.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.07	UGL	103.5	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.90	UGL	95.0	(70-130)
LCS1	Endosulfan Sulfate	2	1.90	UGL	95.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.02	UGL	101.0	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.90	UGL	95.0	(70-130)
LCS1	Fluoranthene	2	2.01	UGL	100.5	(70-130)

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LCS2	Fluoranthene	2	2.06	UGL	103.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Fluoranthene	100.500	103.000	UGL	2.5	(0-20)
LCS1	Fluorene	2	1.96	UGL	98.0	(70-130)
LCS2	Fluorene	2	1.98	UGL	99.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MRLMD	Fluorene	0.05	0.050	UGL	100.0	(50-150)
MS	Fluorene	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Fluorene	98.000	99.000	UGL	1.0	(0-20)
LCS1	gamma-Chlordane	2	1.85	UGL	92.5	(70-130)
LCS2	gamma-Chlordane	2	1.95	UGL	97.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLMD	gamma-Chlordane	0.05	0.060	UGL	120.0	(50-150)
MS	gamma-Chlordane	2	1.93	UGL	96.5	(70-130)
RPD_LCS	gamma-Chlordane	92.500	97.500	UGL	5.3	(0-20)
LCS1	Hexachlorobenzene	2	1.97	UGL	98.5	(70-130)
LCS2	Hexachlorobenzene	2	1.96	UGL	98.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MRLMD	Hexachlorobenzene	0.15	0.16	UGL	106.7	(50-150)
MS	Hexachlorobenzene	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Hexachlorobenzene	98.500	98.000	UGL	0.5	(0-20)
LCS1	Hexachlorocyclopentadiene	2	1.93	UGL	96.5	(70-130)
LCS2	Hexachlorocyclopentadiene	2	1.92	UGL	96.0	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLMD	Hexachlorocyclopentadiene	0.15	0.14	UGL	93.3	(50-150)
MS	Hexachlorocyclopentadiene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	96.500	96.000	UGL	0.5	(0-20)
LCS1	Heptachlor	2	1.83	UGL	91.5	(70-130)
LCS2	Heptachlor	2	1.89	UGL	94.5	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLMD	Heptachlor	0.05	0.050	UGL	100.0	(50-150)
MS	Heptachlor	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Heptachlor	91.500	94.500	UGL	3.2	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	1.90	UGL	95.0	(70-130)

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MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLMD	Heptachlor Epoxide (isomer B)	0.05	0.060	UGL	120.0	(50-150)
MS	Heptachlor Epoxide (isomer B)	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.000	95.000	UGL	5.1	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	1.94	UGL	97.0	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	1.83	UGL	91.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MRLMD	Indeno(1,2,3,c,d)Pyrene	0.05	0.050	UGL	100.0	(50-150)
MS	Indeno(1,2,3,c,d)Pyrene	2	1.78	UGL	89.0	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	97.000	91.500	UGL	5.8	(0-20)
LCS1	Isophorone	2	1.89	UGL	94.5	(70-130)
LCS2	Isophorone	2	1.98	UGL	99.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.94	UGL	97.0	(70-130)
RPD_LCS	Isophorone	94.500	99.000	UGL	4.7	(0-20)
LCS1	Lindane	2	1.78	UGL	89.0	(70-130)
LCS2	Lindane	2	1.80	UGL	90.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLMD	Lindane	0.05	0.050	UGL	100.0	(50-150)
MS	Lindane	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Lindane	89.000	90.000	UGL	1.1	(0-20)
LCS1	Methoxychlor	2	2.10	UGL	105.0	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.27	UGL	113.5	(70-130)
RPD_LCS	Methoxychlor	105.000	103.500	UGL	1.4	(0-20)
LCS1	Metribuzin	2	1.95	UGL	97.5	(70-130)
LCS2	Metribuzin	2	1.99	UGL	99.5	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLMD	Metribuzin	0.05	0.050	UGL	100.0	(50-150)
MS	Metribuzin	2	1.86	UGL	93.0	(70-130)
RPD_LCS	Metribuzin	97.500	99.500	UGL	2.0	(0-20)
LCS1	Malathion	2	2.09	UGL	104.5	(70-130)
LCS2	Malathion	2	2.17	UGL	108.5	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)

RPD_LCS	Malathion	104.500	108.500	UGL	3.8	(0-20)
LCS1	Molinate	2	2.02	UGL	101.0	(70-130)
LCS2	Molinate	2	2.01	UGL	100.5	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Molinate	101.000	100.500	UGL	0.5	(0-20)
LCS1	Metolachlor	2	2.10	UGL	105.0	(70-130)
LCS2	Metolachlor	2	2.11	UGL	105.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLMD	Metolachlor	0.05	0.050	UGL	100.0	(50-150)
MS	Metolachlor	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Metolachlor	105.000	105.500	UGL	0.5	(0-20)
LCS1	Naphthalene	2	1.89	UGL	94.5	(70-130)
LCS2	Naphthalene	2	1.92	UGL	96.0	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MS	Naphthalene	2	1.92	UGL	96.0	(70-130)
RPD_LCS	Naphthalene	94.500	96.000	UGL	1.6	(0-20)
LCS1	trans-Nonachlor	2	1.91	UGL	95.5	(70-130)
LCS2	trans-Nonachlor	2	1.91	UGL	95.5	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MRLMD	trans-Nonachlor	0.05	0.060	UGL	120.0	(50-150)
MS	trans-Nonachlor	2	2.06	UGL	103.0	(70-130)
RPD_LCS	trans-Nonachlor	95.500	95.500	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	8.20	UGL	102.5	(70-130)
LCS2	Pentachlorophenol	8	7.98	UGL	99.8	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.88	UGL	111.0	(70-130)
RPD_LCS	Pentachlorophenol	102.500	99.750	UGL	2.7	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.95	UGL	98.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.80	UGL	95.0	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	4.10	UGL	102.5	(70-130)
RPD_LCS	Permethrin (mixed isomers)	98.750	95.000	UGL	3.9	(0-20)
LCS1	Phenanthrene	2	1.96	UGL	98.0	(70-130)
LCS2	Phenanthrene	2	1.93	UGL	96.5	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		

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Locus Technologies
(continued)

MRLMD	Phenanthrene	0.05	0.050	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.94	UGL	97.0	(70-130)
RPD_LCS	Phenanthrene	98.000	96.500	UGL	1.5	(0-20)
LCS1	Propachlor	2	1.91	UGL	95.5	(70-130)
LCS2	Propachlor	2	1.80	UGL	90.0	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLMD	Propachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Propachlor	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Propachlor	95.500	90.000	UGL	5.9	(0-20)
LCS1	Parathion	2	2.01	UGL	100.5	(70-130)
LCS2	Parathion	2	2.10	UGL	105.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Parathion	100.500	105.000	UGL	4.4	(0-20)
LCS1	Pyrene	2	1.97	UGL	98.5	(70-130)
LCS2	Pyrene	2	2.02	UGL	101.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MRLMD	Pyrene	0.05	0.050	UGL	100.0	(50-150)
MS	Pyrene	2	1.90	UGL	95.0	(70-130)
RPD_LCS	Pyrene	98.500	101.000	UGL	2.5	(0-20)
LCS1	Simazine	2	1.86	UGL	93.0	(70-130)
LCS2	Simazine	2	1.95	UGL	97.5	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MRLMD	Simazine	0.05	0.040	UGL	80.0	(50-150)
MS	Simazine	2	1.74	UGL	87.0	(70-130)
RPD_LCS	Simazine	93.000	97.500	UGL	4.7	(0-20)
LCS1	Perylene-d12	100	97	%R	97.0	(70-130)
LCS2	Perylene-d12	100	95	%R	95.0	(70-130)
MBLK	Perylene-d12	100	74	%R	74.0	
MRLMD	Perylene-d12	100	77	%R	77.0	(70-130)
MS	Perylene-d12	100	91	%R	91.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	101	%R	101.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	100	%R	100.0	
MRLMD	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	99	%R	99.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Triphenylphosphate	100	103	%R	103.0	(70-130)
LCS2	Triphenylphosphate	100	101	%R	101.0	(70-130)
MBLK	Triphenylphosphate	100	103	%R	103.0	
MRLMD	Triphenylphosphate	100	100	%R	100.0	(70-130)
MS	Triphenylphosphate	100	98	%R	98.0	(70-130)
LCS1	Thiobencarb (ELAP Cert)	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb (ELAP Cert)	2	2.09	UGL	104.5	(70-130)
MBLK	Thiobencarb (ELAP Cert)	ND	<0.2	UGL		
MS	Thiobencarb (ELAP Cert)	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Thiobencarb (ELAP Cert)	105.000	104.500	UGL	0.5	(0-20)
LCS1	Terbacil	2	1.99	UGL	99.5	(70-130)
LCS2	Terbacil	2	2.02	UGL	101.0	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Terbacil	99.500	101.000	UGL	1.5	(0-20)
LCS1	Trifluralin	2	2.04	UGL	102.0	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Trifluralin	102.000	105.000	UGL	2.9	(0-20)

QC Ref #441250 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	20	24.4	NGL	122.0	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	50	53.7	NGL	107.4	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	114	NGL	114.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
LCS1	Perfluoro octanoic acid - PFOA	20	19	NGL	95.0	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	50	58.8	NGL	117.6	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	89	NGL	89.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
LCS1	Perfluoro octanesulfonate-PFOS	20	25.6	NGL	128.0	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	50	52.0	NGL	104.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	97.9	NGL	97.9	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL		
LCS1	Internal Standard	100	112	%R	112.0	(80-120)
LCS2	Internal Standard	100	108	%R	108.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	98	%R		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
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Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Jul 23 2008
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA

Report#: 245232
Project: RECLAIMED

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are QC Report,QC Summary,Data Report,Hits Report, totaling 38 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
Group#: 245232
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **06/24/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2806240498	SJ/SC-C 2514C	@525PLUS	Water	18-jun-2008 14:00:00
2806240500	SCRWA-D 2514H	@525PLUS	Water	18-jun-2008 14:00:00
2806240501	SCRWA-C 2514G	@525PLUS	Water	18-jun-2008 14:00:00
2806240502	DI-C 2514K	@525PLUS	Water	18-jun-2008 14:30:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS

1 of 2
245232

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER ______ (SIGN)

SAMPLERS Vector (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB MWH Laboratories

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	Field Filtered (check)	ANALYSIS REQUESTED: 525	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/18	14:00	SJ/SC-C 2514C				B	G			X		X	1	14 dy					
2	6/18	15:00	↓				B	G			X		↓	1	↓					
3	6/18	14:00	SCRWA-D 2514H				B	G			X			1						
4	6/18	15:00	↓				B	G			X			1						
5	6/18	14:00	SCRWA-C 2514G				B	G			X			1						
6	6/18	14:30	↓				B	G			X			1						
7	6/18	14:30	DI-C 2514K				B	H			X			1						
8	6/18	15:00	↓				B	H			X		↓	1	↓					
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Susan Stewart		06/24/08	08:30

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Carrier	Icebox		Susan Stewart	6/23/08				

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

MWH Laboratories
A Division of MWH Americas, Inc.

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Laboratory
Hits Report
#245232

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
24-jun-2008 19:04:07

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2806240498	**SJ/SC-C 2514C**				
	2806240500	**SCRWA-D 2514H**				
	2806240501	**SCRWA-C 2514G**				
	2806240502	**DI-C 2514K**				
07/10/08	Diethylphthalate		0.6		ug/l	0.5

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Data Report
#245232

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
06/24/08

SJ/SC-C 2514C (2806240498) Sampled on 06/18/08 14:00

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Thiobencarb	ND	ug/l	0.2	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/02/08	07/10/08 08:55	437373	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	88	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	106	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	110	% Rec		

SCRWA-D 2514H (2806240500) Sampled on 06/18/08 14:00

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Thiobencarb	ND	ug/l	0.2	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/02/08	07/10/08 09:19	437373	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	110	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	88	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	105	% Rec		

SCRWA-C 2514G (2806240501) Sampled on 06/18/08 14:00

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	EPTC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Thiobencarb	ND	ug/l	0.2	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/02/08	07/10/08 23:13	438687	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	99	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	111	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	96	% Rec		

DI-C 2514K (2806240502) Sampled on 06/18/08 14:30

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Diethylphthalate	0.6	ug/l	0.5	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Thiobencarb	ND	ug/l	0.2	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
07/02/08	07/10/08 23:36	438687	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	99	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	109	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	71	% Rec		

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Laboratory
QC Summary
#245232

Locus Technologies

QC Ref #437373 - 525 Semivolatiles by GC/MS Analysis Date: 07/10/2008

2806240498	SJ/SC-C 2514C	Analyzed by: jxt
2806240500	SCRWA-D 2514H	Analyzed by: jxt

QC Ref #438687 - 525 Semivolatiles by GC/MS Analysis Date: 07/10/2008

2806240501	SCRWA-C 2514G	Analyzed by: jxt
2806240502	DI-C 2514K	Analyzed by: jxt

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Laboratory
QC Report
#245232

Locus Technologies

QC Ref #437373 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,4-Dinitrotoluene	0.1	0.090	UGL	90.0	(50-150)	
MS	2,4-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	96.500	93.500	UGL	3.2	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.92	UGL	96.0	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.98	UGL	99.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,6-Dinitrotoluene	0.1	0.090	UGL	90.0	(50-150)	
MS	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	96.000	99.000	UGL	3.1	(0-20)	
LCS1	Alpha-BHC	2	2.23	UGL	111.5	(70-130)	
LCS2	Alpha-BHC	2	2.19	UGL	109.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			
MRLHI	Alpha-BHC	0.1	0.10	UGL	100.0	(50-150)	
MS	Alpha-BHC	2	2.22	UGL	111.0	(70-130)	
LCS1	alpha-Chlordane	2	2.22	UGL	111.0	(70-130)	
LCS2	alpha-Chlordane	2	2.17	UGL	108.5	(70-130)	
MBLK	alpha-Chlordane	ND	<0.05	UGL			
MRLHI	alpha-Chlordane	0.1	0.12	UGL	120.0	(50-150)	
MS	alpha-Chlordane	2	2.29	UGL	114.5	(70-130)	
RPD_LCS	alpha-Chlordane	111.000	108.500	UGL	2.3	(0-20)	
LCS1	Diazinon (Qualitative)	2	1.95	UGL	97.5	(70-130)	
LCS2	Diazinon (Qualitative)	2	1.96	UGL	98.0	(70-130)	
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL			
MRLHI	Diazinon (Qualitative)	0.1	0.090	UGL	90.0	(50-150)	
MS	Diazinon (Qualitative)	2	2.05	UGL	102.5	(70-130)	
RPD_LCS	Diazinon (Qualitative)	97.500	98.000	UGL	0.5	(0-20)	
MS	Spiked sample	Lab # 28	06200102	NONE		(0-0)	
LCS1	Acenaphthene	2	2.17	UGL	108.5	(70-130)	
LCS2	Acenaphthene	2	2.13	UGL	106.5	(70-130)	
MBLK	Acenaphthene	ND	<0.1	UGL			

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MRLHI	Acenaphthene	0.1	0.11	UGL	110.0	(50-150)
MS	Acenaphthene	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Acenaphthene	108.500	106.500	UGL	1.9	(0-20)
LCS1	Acenaphthylene	2	2.15	UGL	107.5	(70-130)
LCS2	Acenaphthylene	2	2.12	UGL	106.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MRLHI	Acenaphthylene	0.1	0.10	UGL	100.0	(50-150)
MS	Acenaphthylene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Acenaphthylene	107.500	106.000	UGL	1.4	(0-20)
LCS1	Acetochlor	2	2.14	UGL	107.0	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MRLHI	Acetochlor	0.1	0.080	UGL	80.0	(50-150)
MS	Acetochlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Acetochlor	107.000	103.000	UGL	3.8	(0-20)
LCS1	Alachlor	2	2.14	UGL	107.0	(70-130)
LCS2	Alachlor	2	2.17	UGL	108.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLHI	Alachlor	0.1	0.10	UGL	100.0	(50-150)
MS	Alachlor	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Alachlor	107.000	108.500	UGL	1.4	(0-20)
LCS1	Aldrin	2	1.97	UGL	98.5	(70-130)
LCS2	Aldrin	2	1.97	UGL	98.5	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MRLHI	Aldrin	0.1	0.11	UGL	110.0	(50-150)
MS	Aldrin	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Aldrin	98.500	98.500	UGL	0.0	(0-20)
LCS1	Anthracene	2	2.00	UGL	100.0	(70-130)
LCS2	Anthracene	2	1.99	UGL	99.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLHI	Anthracene	0.1	0.080	UGL	80.0	(50-150)
MS	Anthracene	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Anthracene	100.000	99.500	UGL	0.5	(0-20)
LCS1	Atrazine	2	2.21	UGL	110.5	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		

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Locus Technologies
(continued)

MRLHI	Atrazine	0.1	0.11	UGL	110.0	(50-150)
MS	Atrazine	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Atrazine	110.500	108.500	UGL	1.8	(0-20)
LCS1	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
LCS2	Benz(a)Anthracene	2	1.99	UGL	99.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLHI	Benz(a)Anthracene	0.1	0.10	UGL	100.0	(50-150)
MS	Benz(a)Anthracene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.000	99.500	UGL	2.5	(0-20)
LCS1	Benzo(a)pyrene	2	2.12	UGL	106.0	(70-130)
LCS2	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLHI	Benzo(a)pyrene	0.1	0.080	UGL	80.0	(50-150)
MS	Benzo(a)pyrene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Benzo(a)pyrene	106.000	104.500	UGL	1.4	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.22	UGL	111.0	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(b)Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	111.000	UGL	3.7	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	2.18	UGL	109.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLHI	Benzo(g,h,i)Perylene	0.1	0.090	UGL	90.0	(50-150)
MS	Benzo(g,h,i)Perylene	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	109.000	107.500	UGL	1.4	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.18	UGL	109.0	(70-130)
LCS2	Benzo(k)Fluoranthene	2	2.09	UGL	104.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(k)Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	109.000	104.500	UGL	4.2	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	2.11	UGL	105.5	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	2.01	UGL	100.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		

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MRLHI	Di(2-Ethylhexyl)phthalate	0.3	0.32	UGL	106.7	(50-150)
MS	Di(2-Ethylhexyl)phthalate	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	105.500	100.500	UGL	4.9	(0-20)
LCS1	Beta-BHC	2	2.26	UGL	113.0	(70-130)
LCS2	Beta-BHC	2	2.16	UGL	108.0	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MRLHI	Beta-BHC	0.1	0.10	UGL	100.0	(50-150)
MS	Beta-BHC	2	2.28	UGL	114.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.36	UGL	118.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.33	UGL	116.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MRLHI	Butylbenzylphthalate	0.3	0.29	UGL	96.7	(50-150)
MS	Butylbenzylphthalate	2	2.34	UGL	117.0	(70-130)
RPD_LCS	Butylbenzylphthalate	118.000	116.500	UGL	1.3	(0-20)
LCS1	Bromacil	2	2.38	UGL	119.0	(70-130)
LCS2	Bromacil	2	2.29	UGL	114.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MRLHI	Bromacil	0.1	0.050	UGL	50.0	(50-150)
MS	Bromacil	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Bromacil	119.000	114.500	UGL	3.9	(0-20)
LCS1	Butachlor	2	2.33	UGL	116.5	(70-130)
LCS2	Butachlor	2	2.39	UGL	119.5	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLHI	Butachlor	0.1	0.11	UGL	110.0	(50-150)
MS	Butachlor	2	2.48	UGL	124.0	(70-130)
RPD_LCS	Butachlor	116.500	119.500	UGL	2.5	(0-20)
LCS1	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.02	UGL		
MRLHI	Caffeine by method 525mod	0.1	0.070	UGL	70.0	(50-150)
MS	Caffeine by method 525mod	2	1.65	UGL	82.5	(46-144)
RPD_LCS	Caffeine by method 525mod	84.500	84.500	UGL	0.0	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.26	UGL	113.0	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.16	UGL	108.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MRLHI	Chlorothalonil(Draconil,Bravo)	0.1	0.10	UGL	100.0	(50-150)

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Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Chlorothalonil(Draconil,Bravo)	2	2.13	UGL	106.5	(70-130)
LCS1	Chrysene	2	2.13	UGL	106.5	(70-130)
LCS2	Chrysene	2	2.11	UGL	105.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLHI	Chrysene	0.1	0.10	UGL	100.0	(50-150)
MS	Chrysene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chrysene	106.500	105.500	UGL	0.9	(0-20)
LCS1	Chlorobenzilate	2	2.34	UGL	117.0	(70-130)
LCS2	Chlorobenzilate	2	2.28	UGL	114.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MRLHI	Chlorobenzilate	0.1	0.070	UGL	70.0	(50-150)
MS	Chlorobenzilate	2	2.36	UGL	118.0	(70-130)
RPD_LCS	Chlorobenzilate	117.000	114.000	UGL	2.6	(0-20)
LCS1	Chloroneb	2	2.09	UGL	104.5	(70-130)
LCS2	Chloroneb	2	2.11	UGL	105.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MRLHI	Chloroneb	0.1	0.10	UGL	100.0	(50-150)
MS	Chloroneb	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Chloroneb	104.500	105.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.19	UGL	109.5	(70-130)
LCS2	Delta-BHC	2	2.22	UGL	111.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MRLHI	Delta-BHC	0.1	0.11	UGL	110.0	(50-150)
MS	Delta-BHC	2	2.24	UGL	112.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.17	UGL	108.5	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.09	UGL	104.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLHI	Dibenz(a,h)Anthracene	0.1	0.10	UGL	100.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	108.500	104.500	UGL	3.8	(0-20)
LCS1	4,4'-DDD	2	2.28	UGL	114.0	(70-130)
LCS2	4,4'-DDD	2	2.22	UGL	111.0	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MRLHI	4,4'-DDD	0.1	0.10	UGL	100.0	(50-150)
MS	4,4'-DDD	2	2.27	UGL	113.5	(70-130)
RPD_LCS	4,4'-DDD	114.000	111.000	UGL	2.7	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	4,4'-DDE	2	2.25	UGL	112.5	(70-130)
LCS2	4,4'-DDE	2	2.12	UGL	106.0	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MRLHI	4,4'-DDE	0.1	0.11	UGL	110.0	(50-150)
MS	4,4'-DDE	2	2.18	UGL	109.0	(70-130)
RPD_LCS	4,4'-DDE	112.500	106.000	UGL	5.9	(0-20)
LCS1	4,4'-DDT	2	2.13	UGL	106.5	(70-130)
LCS2	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MRLHI	4,4'-DDT	0.1	0.070	UGL	70.0	(50-150)
MS	4,4'-DDT	2	2.10	UGL	105.0	(70-130)
RPD_LCS	4,4'-DDT	106.500	97.500	UGL	8.8	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.19	UGL	109.5	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.16	UGL	108.0	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLHI	Dichlorvos (DDVP)	0.1	0.090	UGL	90.0	(50-150)
MS	Dichlorvos (DDVP)	2	2.21	UGL	110.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	109.500	108.000	UGL	1.4	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.27	UGL	113.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	2.15	UGL	107.5	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MRLHI	Di-(2-Ethylhexyl)adipate	0.3	0.28	UGL	93.3	(50-150)
MS	Di-(2-Ethylhexyl)adipate	2	2.27	UGL	113.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	113.500	107.500	UGL	5.4	(0-20)
LCS1	Diethylphthalate	2	2.35	UGL	117.5	(70-130)
LCS2	Diethylphthalate	2	2.21	UGL	110.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MRLHI	Diethylphthalate	0.3	0.35	UGL	116.7	(50-150)
MS	Diethylphthalate	2	2.49	UGL	124.5	(70-130)
RPD_LCS	Diethylphthalate	117.500	110.500	UGL	6.1	(0-20)
LCS1	Dieldrin	2	2.34	UGL	117.0	(70-130)
LCS2	Dieldrin	2	2.26	UGL	113.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MRLHI	Dieldrin	0.1	0.12	UGL	120.0	(50-150)
MS	Dieldrin	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Dieldrin	117.000	113.000	UGL	3.5	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Dimethylphthalate	2	2.18	UGL	109.0	(70-130)
LCS2	Dimethylphthalate	2	2.18	UGL	109.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MRLHI	Dimethylphthalate	0.3	0.31	UGL	103.3	(50-150)
MS	Dimethylphthalate	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Dimethylphthalate	109.000	109.000	UGL	0.0	(0-20)
LCS1	Dimethoate	2	1.31	UGL	65.5	(35-100)
LCS2	Dimethoate	2	1.40	UGL	70.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MRLHI	Dimethoate	0.1	0.070	UGL	70.0	(50-150)
MS	Dimethoate	2	1.46	UGL	73.0	(34-111)
RPD_LCS	Dimethoate	65.500	70.000	UGL	6.6	(0-20)
LCS1	Di-n-Butylphthalate	4	4.86	UGL	121.5	(70-130)
LCS2	Di-n-Butylphthalate	4	4.77	UGL	119.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MRLHI	Di-n-Butylphthalate	0.3	0.40	UGL	133.3	(50-150)
MS	Di-n-Butylphthalate	4	4.84	UGL	121.0	(70-130)
RPD_LCS	Di-n-Butylphthalate	121.500	119.250	UGL	1.9	(0-20)
LCS1	Di-N-octylphthalate	2	2.18	UGL	109.0	(70-130)
LCS2	Di-N-octylphthalate	2	2.00	UGL	100.0	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MRLHI	Di-N-octylphthalate	0.1	0.070	UGL	70.0	(50-150)
MS	Di-N-octylphthalate	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Di-N-octylphthalate	109.000	100.000	UGL	8.6	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.17	UGL	108.5	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.16	UGL	108.0	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLHI	Chlorpyrifos (Dursban)	0.1	0.10	UGL	100.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	108.500	108.000	UGL	0.5	(0-20)
LCS1	Endrin Aldehyde	2	2.24	UGL	112.0	(70-130)
LCS2	Endrin Aldehyde	2	2.28	UGL	114.0	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MRLHI	Endrin Aldehyde	0.1	0.13	UGL	130.0	(50-150)
MS	Endrin Aldehyde	2	2.31	UGL	115.5	(70-130)
LCS1	Endrin	2	2.01	UGL	100.5	(70-130)

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Locus Technologies
(continued)

LCS2	Endrin	2	1.88	UGL	94.0	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MRLHI	Endrin	0.1	0.060	UGL	60.0	(50-150)
MS	Endrin	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Endrin	100.500	94.000	UGL	6.7	(0-20)
LCS1	EPTC	2	2.18	UGL	109.0	(70-130)
LCS2	EPTC	2	2.17	UGL	108.5	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MRLHI	EPTC	0.1	0.11	UGL	110.0	(50-150)
MS	EPTC	2	2.21	UGL	110.5	(70-130)
RPD_LCS	EPTC	109.000	108.500	UGL	0.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	2.25	UGL	112.5	(70-130)
LCS2	Endosulfan I (Alpha)	2	2.33	UGL	116.5	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MRLHI	Endosulfan I (Alpha)	0.1	0.14	UGL	140.0	(50-150)
MS	Endosulfan I (Alpha)	2	2.36	UGL	118.0	(70-130)
LCS1	Endosulfan II (Beta)	2	2.19	UGL	109.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.21	UGL	110.5	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MRLHI	Endosulfan II (Beta)	0.1	0.13	UGL	130.0	(50-150)
MS	Endosulfan II (Beta)	2	2.19	UGL	109.5	(70-130)
LCS1	Endosulfan Sulfate	2	2.31	UGL	115.5	(70-130)
LCS2	Endosulfan Sulfate	2	2.28	UGL	114.0	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MRLHI	Endosulfan Sulfate	0.1	0.080	UGL	80.0	(50-150)
MS	Endosulfan Sulfate	2	2.26	UGL	113.0	(70-130)
LCS1	Fluoranthene	2	2.27	UGL	113.5	(70-130)
LCS2	Fluoranthene	2	2.24	UGL	112.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MRLHI	Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Fluoranthene	2	2.23	UGL	111.5	(70-130)
RPD_LCS	Fluoranthene	113.500	112.000	UGL	1.3	(0-20)
LCS1	Fluorene	2	2.17	UGL	108.5	(70-130)
LCS2	Fluorene	2	2.07	UGL	103.5	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MRLHI	Fluorene	0.1	0.10	UGL	100.0	(50-150)

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Locus Technologies
(continued)

MS	Fluorene	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Fluorene	108.500	103.500	UGL	4.7	(0-20)
LCS1	gamma-Chlordane	2	2.20	UGL	110.0	(70-130)
LCS2	gamma-Chlordane	2	2.12	UGL	106.0	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLHI	gamma-Chlordane	0.1	0.10	UGL	100.0	(50-150)
MS	gamma-Chlordane	2	2.13	UGL	106.5	(70-130)
RPD_LCS	gamma-Chlordane	110.000	106.000	UGL	3.7	(0-20)
LCS1	Hexachlorobenzene	2	2.17	UGL	108.5	(70-130)
LCS2	Hexachlorobenzene	2	2.18	UGL	109.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MRLHI	Hexachlorobenzene	0.3	0.32	UGL	106.7	(50-150)
MS	Hexachlorobenzene	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Hexachlorobenzene	108.500	109.000	UGL	0.5	(0-20)
LCS1	Hexachlorocyclopentadiene	2	1.90	UGL	95.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	1.84	UGL	92.0	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLHI	Hexachlorocyclopentadiene	0.3	0.26	UGL	86.7	(50-150)
MS	Hexachlorocyclopentadiene	2	1.84	UGL	92.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	95.000	92.000	UGL	3.2	(0-20)
LCS1	Heptachlor	2	2.02	UGL	101.0	(70-130)
LCS2	Heptachlor	2	2.06	UGL	103.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLHI	Heptachlor	0.1	0.090	UGL	90.0	(50-150)
MS	Heptachlor	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Heptachlor	101.000	103.000	UGL	2.0	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.24	UGL	112.0	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	2.28	UGL	114.0	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLHI	Heptachlor Epoxide (isomer B)	0.1	0.11	UGL	110.0	(50-150)
MS	Heptachlor Epoxide (isomer B)	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	112.000	114.000	UGL	1.8	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MRLHI	Indeno(1,2,3,c,d)Pyrene	0.1	0.10	UGL	100.0	(50-150)

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Locus Technologies
(continued)

MS	Indeno(1,2,3,c,d)Pyrene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	110.500	105.000	UGL	5.1	(0-20)
LCS1	Isophorone	2	2.13	UGL	106.5	(70-130)
LCS2	Isophorone	2	2.16	UGL	108.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MRLHI	Isophorone	0.1	0.12	UGL	120.0	(50-150)
MS	Isophorone	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Isophorone	106.500	108.000	UGL	1.4	(0-20)
LCS1	Lindane	2	2.00	UGL	100.0	(70-130)
LCS2	Lindane	2	1.95	UGL	97.5	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLHI	Lindane	0.1	0.12	UGL	120.0	(50-150)
MS	Lindane	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Lindane	100.000	97.500	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.22	UGL	111.0	(70-130)
LCS2	Methoxychlor	2	2.20	UGL	110.0	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MRLHI	Methoxychlor	0.1	0.070	UGL	70.0	(50-150)
MS	Methoxychlor	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Methoxychlor	111.000	110.000	UGL	0.9	(0-20)
LCS1	Metribuzin	2	2.17	UGL	108.5	(70-130)
LCS2	Metribuzin	2	2.16	UGL	108.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLHI	Metribuzin	0.1	0.090	UGL	90.0	(50-150)
MS	Metribuzin	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Metribuzin	108.500	108.000	UGL	0.5	(0-20)
LCS1	Malathion	2	2.32	UGL	116.0	(70-130)
LCS2	Malathion	2	2.33	UGL	116.5	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MRLHI	Malathion	0.1	0.10	UGL	100.0	(50-150)
MS	Malathion	2	2.37	UGL	118.5	(70-130)
RPD_LCS	Malathion	116.000	116.500	UGL	0.4	(0-20)
LCS1	Molinate	2	2.23	UGL	111.5	(70-130)
LCS2	Molinate	2	2.26	UGL	113.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MRLHI	Molinate	0.1	0.10	UGL	100.0	(50-150)

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MS	Molinate	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Molinate	111.500	113.000	UGL	1.3	(0-20)
LCS1	Metolachlor	2	2.33	UGL	116.5	(70-130)
LCS2	Metolachlor	2	2.28	UGL	114.0	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLHI	Metolachlor	0.1	0.11	UGL	110.0	(50-150)
MS	Metolachlor	2	2.34	UGL	117.0	(70-130)
RPD_LCS	Metolachlor	116.500	114.000	UGL	2.2	(0-20)
LCS1	Naphthalene	2	2.10	UGL	105.0	(70-130)
LCS2	Naphthalene	2	2.10	UGL	105.0	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MRLHI	Naphthalene	0.1	0.10	UGL	100.0	(50-150)
MS	Naphthalene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Naphthalene	105.000	105.000	UGL	0.0	(0-20)
LCS1	trans-Nonachlor	2	2.23	UGL	111.5	(70-130)
LCS2	trans-Nonachlor	2	2.25	UGL	112.5	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MRLHI	trans-Nonachlor	0.1	0.10	UGL	100.0	(50-150)
MS	trans-Nonachlor	2	2.09	UGL	104.5	(70-130)
RPD_LCS	trans-Nonachlor	111.500	112.500	UGL	0.9	(0-20)
LCS1	Pentachlorophenol	8	6.37	UGL	79.6	(70-130)
LCS2	Pentachlorophenol	8	5.72	UGL	71.5	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MRLHI	Pentachlorophenol	1.2	0.79	UGL	65.8	(50-150)
MS	Pentachlorophenol	8	7.76	UGL	97.0	(70-130)
RPD_LCS	Pentachlorophenol	79.625	71.500	UGL	10.8	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.58	UGL	114.5	(70-130)
LCS2	Permethrin (mixed isomers)	4	4.40	UGL	110.0	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MRLHI	Permethrin (mixed isomers)	0.2	0.13	UGL	65.0	(50-150)
MS	Permethrin (mixed isomers)	4	4.45	UGL	111.2	(70-130)
RPD_LCS	Permethrin (mixed isomers)	114.500	110.000	UGL	4.0	(0-20)
LCS1	Phenanthrene	2	2.10	UGL	105.0	(70-130)
LCS2	Phenanthrene	2	2.09	UGL	104.5	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLHI	Phenanthrene	0.1	0.10	UGL	100.0	(50-150)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies (continued)

MS	Phenanthrene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Phenanthrene	105.000	104.500	UGL	0.5	(0-20)
LCS1	Propachlor	2	2.07	UGL	103.5	(70-130)
LCS2	Propachlor	2	1.97	UGL	98.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLHI	Propachlor	0.1	0.12	UGL	120.0	(50-150)
MS	Propachlor	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Propachlor	103.500	98.500	UGL	5.0	(0-20)
LCS1	Parathion	2	2.35	UGL	117.5	(70-130)
LCS2	Parathion	2	2.21	UGL	110.5	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MRLHI	Parathion	0.1	0.080	UGL	80.0	(50-150)
MS	Parathion	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Parathion	117.500	110.500	UGL	6.1	(0-20)
LCS1	Pyrene	2	2.26	UGL	113.0	(70-130)
LCS2	Pyrene	2	2.23	UGL	111.5	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MRLHI	Pyrene	0.1	0.10	UGL	100.0	(50-150)
MS	Pyrene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Pyrene	113.000	111.500	UGL	1.3	(0-20)
LCS1	Simazine	2	2.02	UGL	101.0	(70-130)
LCS2	Simazine	2	2.00	UGL	100.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MRLHI	Simazine	0.1	0.10	UGL	100.0	(50-150)
MS	Simazine	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Simazine	101.000	100.000	UGL	1.0	(0-20)
LCS1	Perylene-d12	100	96	%R	96.0	(70-130)
LCS2	Perylene-d12	100	93	%R	93.0	(70-130)
MBLK	Perylene-d12	100	78	%R	78.0	
MRLHI	Perylene-d12	100	86	%R	86.0	(70-130)
MS	Perylene-d12	100	96	%R	96.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	102	%R	102.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	103	%R	103.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	
MRLHI	1,3-dimethyl-2-nitrobenzene	100	102	%R	102.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	104	%R	104.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Triphenylphosphate	100	109	%R	109.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	107	%R	107.0	
MRLHI	Triphenylphosphate	100	101	%R	101.0	(70-130)
MS	Triphenylphosphate	100	108	%R	108.0	(70-130)
LCS1	Thiobencarb	2	2.24	UGL	112.0	(70-130)
LCS2	Thiobencarb	2	2.27	UGL	113.5	(70-130)
MBLK	Thiobencarb	ND	<0.2	UGL		
MRLHI	Thiobencarb	0.1	0.11	UGL	110.0	(50-150)
MS	Thiobencarb	2	2.31	UGL	115.5	(70-130)
RPD_LCS	Thiobencarb	112.000	113.500	UGL	1.3	(0-20)
LCS1	Terbacil	2	2.15	UGL	107.5	(70-130)
LCS2	Terbacil	2	2.15	UGL	107.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MRLHI	Terbacil	0.1	0.090	UGL	90.0	(50-150)
MS	Terbacil	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Terbacil	107.500	107.500	UGL	0.0	(0-20)
LCS1	Trifluralin	2	2.30	UGL	115.0	(70-130)
LCS2	Trifluralin	2	2.29	UGL	114.5	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MRLHI	Trifluralin	0.1	0.10	UGL	100.0	(50-150)
MS	Trifluralin	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Trifluralin	115.000	114.500	UGL	0.4	(0-20)

QC Ref #438687 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,4-Dinitrotoluene	0.1	0.090	UGL	90.0	(50-150)	
MS	2,4-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	96.500	93.500	UGL	3.2	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.92	UGL	96.0	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.98	UGL	99.0	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL		
MRLHI	2,6-Dinitrotoluene	0.1	0.090	UGL	90.0	(50-150)
MS	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)
RPD_LCS	2,6-Dinitrotoluene	96.000	99.000	UGL	3.1	(0-20)
LCS1	Alpha-BHC	2	2.23	UGL	111.5	(70-130)
LCS2	Alpha-BHC	2	2.19	UGL	109.5	(70-130)
MBLK	Alpha-BHC	ND	<0.1	UGL		
MRLHI	Alpha-BHC	0.1	0.10	UGL	100.0	(50-150)
MS	Alpha-BHC	2	2.22	UGL	111.0	(70-130)
LCS1	alpha-Chlordane	2	2.22	UGL	111.0	(70-130)
LCS2	alpha-Chlordane	2	2.17	UGL	108.5	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MRLHI	alpha-Chlordane	0.1	0.12	UGL	120.0	(50-150)
MS	alpha-Chlordane	2	2.29	UGL	114.5	(70-130)
RPD_LCS	alpha-Chlordane	111.000	108.500	UGL	2.3	(0-20)
LCS1	Diazinon (Qualitative)	2	1.95	UGL	97.5	(70-130)
LCS2	Diazinon (Qualitative)	2	1.96	UGL	98.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MRLHI	Diazinon (Qualitative)	0.1	0.090	UGL	90.0	(50-150)
MS	Diazinon (Qualitative)	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	97.500	98.000	UGL	0.5	(0-20)
MS	Spiked sample	Lab # 28	06200102	NONE		(0-0)
LCS1	Acenaphthene	2	2.17	UGL	108.5	(70-130)
LCS2	Acenaphthene	2	2.13	UGL	106.5	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MRLHI	Acenaphthene	0.1	0.11	UGL	110.0	(50-150)
MS	Acenaphthene	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Acenaphthene	108.500	106.500	UGL	1.9	(0-20)
LCS1	Acenaphthylene	2	2.15	UGL	107.5	(70-130)
LCS2	Acenaphthylene	2	2.12	UGL	106.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MRLHI	Acenaphthylene	0.1	0.10	UGL	100.0	(50-150)
MS	Acenaphthylene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Acenaphthylene	107.500	106.000	UGL	1.4	(0-20)
LCS1	Acetochlor	2	2.14	UGL	107.0	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Acetochlor	ND	<0.1	UGL		
MRLHI	Acetochlor	0.1	0.080	UGL	80.0	(50-150)
MS	Acetochlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Acetochlor	107.000	103.000	UGL	3.8	(0-20)
LCS1	Alachlor	2	2.14	UGL	107.0	(70-130)
LCS2	Alachlor	2	2.17	UGL	108.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLHI	Alachlor	0.1	0.10	UGL	100.0	(50-150)
MS	Alachlor	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Alachlor	107.000	108.500	UGL	1.4	(0-20)
LCS1	Aldrin	2	1.97	UGL	98.5	(70-130)
LCS2	Aldrin	2	1.97	UGL	98.5	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MRLHI	Aldrin	0.1	0.11	UGL	110.0	(50-150)
MS	Aldrin	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Aldrin	98.500	98.500	UGL	0.0	(0-20)
LCS1	Anthracene	2	2.00	UGL	100.0	(70-130)
LCS2	Anthracene	2	1.99	UGL	99.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLHI	Anthracene	0.1	0.080	UGL	80.0	(50-150)
MS	Anthracene	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Anthracene	100.000	99.500	UGL	0.5	(0-20)
LCS1	Atrazine	2	2.21	UGL	110.5	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MRLHI	Atrazine	0.1	0.11	UGL	110.0	(50-150)
MS	Atrazine	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Atrazine	110.500	108.500	UGL	1.8	(0-20)
LCS1	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
LCS2	Benz(a)Anthracene	2	1.99	UGL	99.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLHI	Benz(a)Anthracene	0.1	0.10	UGL	100.0	(50-150)
MS	Benz(a)Anthracene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.000	99.500	UGL	2.5	(0-20)
LCS1	Benzo(a)pyrene	2	2.12	UGL	106.0	(70-130)
LCS2	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLHI	Benzo(a)pyrene	0.1	0.080	UGL	80.0	(50-150)
MS	Benzo(a)pyrene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Benzo(a)pyrene	106.000	104.500	UGL	1.4	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.22	UGL	111.0	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(b)Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	111.000	UGL	3.7	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	2.18	UGL	109.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLHI	Benzo(g,h,i)Perylene	0.1	0.090	UGL	90.0	(50-150)
MS	Benzo(g,h,i)Perylene	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	109.000	107.500	UGL	1.4	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.18	UGL	109.0	(70-130)
LCS2	Benzo(k)Fluoranthene	2	2.09	UGL	104.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(k)Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	109.000	104.500	UGL	4.2	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	2.11	UGL	105.5	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	2.01	UGL	100.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MRLHI	Di(2-Ethylhexyl)phthalate	0.3	0.32	UGL	106.7	(50-150)
MS	Di(2-Ethylhexyl)phthalate	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	105.500	100.500	UGL	4.9	(0-20)
LCS1	Beta-BHC	2	2.26	UGL	113.0	(70-130)
LCS2	Beta-BHC	2	2.16	UGL	108.0	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MRLHI	Beta-BHC	0.1	0.10	UGL	100.0	(50-150)
MS	Beta-BHC	2	2.28	UGL	114.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.36	UGL	118.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.33	UGL	116.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MRLHI	Butylbenzylphthalate	0.3	0.29	UGL	96.7	(50-150)
MS	Butylbenzylphthalate	2	2.34	UGL	117.0	(70-130)
RPD_LCS	Butylbenzylphthalate	118.000	116.500	UGL	1.3	(0-20)
LCS1	Bromacil	2	2.38	UGL	119.0	(70-130)
LCS2	Bromacil	2	2.29	UGL	114.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MRLHI	Bromacil	0.1	0.050	UGL	50.0	(50-150)
MS	Bromacil	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Bromacil	119.000	114.500	UGL	3.9	(0-20)
LCS1	Butachlor	2	2.33	UGL	116.5	(70-130)
LCS2	Butachlor	2	2.39	UGL	119.5	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLHI	Butachlor	0.1	0.11	UGL	110.0	(50-150)
MS	Butachlor	2	2.48	UGL	124.0	(70-130)
RPD_LCS	Butachlor	116.500	119.500	UGL	2.5	(0-20)
LCS1	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.02	UGL		
MRLHI	Caffeine by method 525mod	0.1	0.070	UGL	70.0	(50-150)
MS	Caffeine by method 525mod	2	1.65	UGL	82.5	(46-144)
RPD_LCS	Caffeine by method 525mod	84.500	84.500	UGL	0.0	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.26	UGL	113.0	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.16	UGL	108.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MRLHI	Chlorothalonil(Draconil,Bravo)	0.1	0.10	UGL	100.0	(50-150)
MS	Chlorothalonil(Draconil,Bravo)	2	2.13	UGL	106.5	(70-130)
LCS1	Chrysene	2	2.13	UGL	106.5	(70-130)
LCS2	Chrysene	2	2.11	UGL	105.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLHI	Chrysene	0.1	0.10	UGL	100.0	(50-150)
MS	Chrysene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chrysene	106.500	105.500	UGL	0.9	(0-20)
LCS1	Chlorobenzilate	2	2.34	UGL	117.0	(70-130)
LCS2	Chlorobenzilate	2	2.28	UGL	114.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MRLHI	Chlorobenzilate	0.1	0.070	UGL	70.0	(50-150)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MS	Chlorobenzilate	2	2.36	UGL	118.0	(70-130)
RPD_LCS	Chlorobenzilate	117.000	114.000	UGL	2.6	(0-20)
LCS1	Chloroneb	2	2.09	UGL	104.5	(70-130)
LCS2	Chloroneb	2	2.11	UGL	105.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MRLHI	Chloroneb	0.1	0.10	UGL	100.0	(50-150)
MS	Chloroneb	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Chloroneb	104.500	105.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.19	UGL	109.5	(70-130)
LCS2	Delta-BHC	2	2.22	UGL	111.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MRLHI	Delta-BHC	0.1	0.11	UGL	110.0	(50-150)
MS	Delta-BHC	2	2.24	UGL	112.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.17	UGL	108.5	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.09	UGL	104.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLHI	Dibenz(a,h)Anthracene	0.1	0.10	UGL	100.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	108.500	104.500	UGL	3.8	(0-20)
LCS1	4,4'-DDD	2	2.28	UGL	114.0	(70-130)
LCS2	4,4'-DDD	2	2.22	UGL	111.0	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MRLHI	4,4'-DDD	0.1	0.10	UGL	100.0	(50-150)
MS	4,4'-DDD	2	2.27	UGL	113.5	(70-130)
RPD_LCS	4,4'-DDD	114.000	111.000	UGL	2.7	(0-20)
LCS1	4,4'-DDE	2	2.25	UGL	112.5	(70-130)
LCS2	4,4'-DDE	2	2.12	UGL	106.0	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MRLHI	4,4'-DDE	0.1	0.11	UGL	110.0	(50-150)
MS	4,4'-DDE	2	2.18	UGL	109.0	(70-130)
RPD_LCS	4,4'-DDE	112.500	106.000	UGL	5.9	(0-20)
LCS1	4,4'-DDT	2	2.13	UGL	106.5	(70-130)
LCS2	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MRLHI	4,4'-DDT	0.1	0.070	UGL	70.0	(50-150)
MS	4,4'-DDT	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	4,4'-DDT	106.500	97.500	UGL	8.8	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.19	UGL	109.5	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.16	UGL	108.0	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLHI	Dichlorvos (DDVP)	0.1	0.090	UGL	90.0	(50-150)
MS	Dichlorvos (DDVP)	2	2.21	UGL	110.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	109.500	108.000	UGL	1.4	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.27	UGL	113.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	2.15	UGL	107.5	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MRLHI	Di-(2-Ethylhexyl)adipate	0.3	0.28	UGL	93.3	(50-150)
MS	Di-(2-Ethylhexyl)adipate	2	2.27	UGL	113.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	113.500	107.500	UGL	5.4	(0-20)
LCS1	Diethylphthalate	2	2.35	UGL	117.5	(70-130)
LCS2	Diethylphthalate	2	2.21	UGL	110.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MRLHI	Diethylphthalate	0.3	0.35	UGL	116.7	(50-150)
MS	Diethylphthalate	2	2.49	UGL	124.5	(70-130)
RPD_LCS	Diethylphthalate	117.500	110.500	UGL	6.1	(0-20)
LCS1	Dieldrin	2	2.34	UGL	117.0	(70-130)
LCS2	Dieldrin	2	2.26	UGL	113.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MRLHI	Dieldrin	0.1	0.12	UGL	120.0	(50-150)
MS	Dieldrin	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Dieldrin	117.000	113.000	UGL	3.5	(0-20)
LCS1	Dimethylphthalate	2	2.18	UGL	109.0	(70-130)
LCS2	Dimethylphthalate	2	2.18	UGL	109.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MRLHI	Dimethylphthalate	0.3	0.31	UGL	103.3	(50-150)
MS	Dimethylphthalate	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Dimethylphthalate	109.000	109.000	UGL	0.0	(0-20)
LCS1	Dimethoate	2	1.31	UGL	65.5	(35-100)
LCS2	Dimethoate	2	1.40	UGL	70.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MRLHI	Dimethoate	0.1	0.070	UGL	70.0	(50-150)
MS	Dimethoate	2	1.46	UGL	73.0	(34-111)

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RPD_LCS	Dimethoate	65.500	70.000	UGL	6.6	(0-20)
LCS1	Di-n-Butylphthalate	4	4.86	UGL	121.5	(70-130)
LCS2	Di-n-Butylphthalate	4	4.77	UGL	119.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MRLHI	Di-n-Butylphthalate	0.3	0.40	UGL	133.3	(50-150)
MS	Di-n-Butylphthalate	4	4.84	UGL	121.0	(70-130)
RPD_LCS	Di-n-Butylphthalate	121.500	119.250	UGL	1.9	(0-20)
LCS1	Di-N-octylphthalate	2	2.18	UGL	109.0	(70-130)
LCS2	Di-N-octylphthalate	2	2.00	UGL	100.0	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MRLHI	Di-N-octylphthalate	0.1	0.070	UGL	70.0	(50-150)
MS	Di-N-octylphthalate	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Di-N-octylphthalate	109.000	100.000	UGL	8.6	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.17	UGL	108.5	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.16	UGL	108.0	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLHI	Chlorpyrifos (Dursban)	0.1	0.10	UGL	100.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	108.500	108.000	UGL	0.5	(0-20)
LCS1	Endrin Aldehyde	2	2.24	UGL	112.0	(70-130)
LCS2	Endrin Aldehyde	2	2.28	UGL	114.0	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MRLHI	Endrin Aldehyde	0.1	0.13	UGL	130.0	(50-150)
MS	Endrin Aldehyde	2	2.31	UGL	115.5	(70-130)
LCS1	Endrin	2	2.01	UGL	100.5	(70-130)
LCS2	Endrin	2	1.88	UGL	94.0	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MRLHI	Endrin	0.1	0.060	UGL	60.0	(50-150)
MS	Endrin	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Endrin	100.500	94.000	UGL	6.7	(0-20)
LCS1	EPTC	2	2.18	UGL	109.0	(70-130)
LCS2	EPTC	2	2.17	UGL	108.5	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MRLHI	EPTC	0.1	0.11	UGL	110.0	(50-150)
MS	EPTC	2	2.21	UGL	110.5	(70-130)
RPD_LCS	EPTC	109.000	108.500	UGL	0.5	(0-20)

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LCS1	Endosulfan I (Alpha)	2	2.25	UGL	112.5	(70-130)
LCS2	Endosulfan I (Alpha)	2	2.33	UGL	116.5	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MRLHI	Endosulfan I (Alpha)	0.1	0.14	UGL	140.0	(50-150)
MS	Endosulfan I (Alpha)	2	2.36	UGL	118.0	(70-130)
LCS1	Endosulfan II (Beta)	2	2.19	UGL	109.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.21	UGL	110.5	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MRLHI	Endosulfan II (Beta)	0.1	0.13	UGL	130.0	(50-150)
MS	Endosulfan II (Beta)	2	2.19	UGL	109.5	(70-130)
LCS1	Endosulfan Sulfate	2	2.31	UGL	115.5	(70-130)
LCS2	Endosulfan Sulfate	2	2.28	UGL	114.0	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MRLHI	Endosulfan Sulfate	0.1	0.080	UGL	80.0	(50-150)
MS	Endosulfan Sulfate	2	2.26	UGL	113.0	(70-130)
LCS1	Fluoranthene	2	2.27	UGL	113.5	(70-130)
LCS2	Fluoranthene	2	2.24	UGL	112.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MRLHI	Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Fluoranthene	2	2.23	UGL	111.5	(70-130)
RPD_LCS	Fluoranthene	113.500	112.000	UGL	1.3	(0-20)
LCS1	Fluorene	2	2.17	UGL	108.5	(70-130)
LCS2	Fluorene	2	2.07	UGL	103.5	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MRLHI	Fluorene	0.1	0.10	UGL	100.0	(50-150)
MS	Fluorene	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Fluorene	108.500	103.500	UGL	4.7	(0-20)
LCS1	gamma-Chlordane	2	2.20	UGL	110.0	(70-130)
LCS2	gamma-Chlordane	2	2.12	UGL	106.0	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLHI	gamma-Chlordane	0.1	0.10	UGL	100.0	(50-150)
MS	gamma-Chlordane	2	2.13	UGL	106.5	(70-130)
RPD_LCS	gamma-Chlordane	110.000	106.000	UGL	3.7	(0-20)
LCS1	Hexachlorobenzene	2	2.17	UGL	108.5	(70-130)
LCS2	Hexachlorobenzene	2	2.18	UGL	109.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		

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Locus Technologies
(continued)

MRLHI	Hexachlorobenzene	0.3	0.32	UGL	106.7	(50-150)
MS	Hexachlorobenzene	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Hexachlorobenzene	108.500	109.000	UGL	0.5	(0-20)
LCS1	Hexachlorocyclopentadiene	2	1.90	UGL	95.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	1.84	UGL	92.0	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLHI	Hexachlorocyclopentadiene	0.3	0.26	UGL	86.7	(50-150)
MS	Hexachlorocyclopentadiene	2	1.84	UGL	92.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	95.000	92.000	UGL	3.2	(0-20)
LCS1	Heptachlor	2	2.02	UGL	101.0	(70-130)
LCS2	Heptachlor	2	2.06	UGL	103.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLHI	Heptachlor	0.1	0.090	UGL	90.0	(50-150)
MS	Heptachlor	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Heptachlor	101.000	103.000	UGL	2.0	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.24	UGL	112.0	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	2.28	UGL	114.0	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLHI	Heptachlor Epoxide (isomer B)	0.1	0.11	UGL	110.0	(50-150)
MS	Heptachlor Epoxide (isomer B)	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	112.000	114.000	UGL	1.8	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MRLHI	Indeno(1,2,3,c,d)Pyrene	0.1	0.10	UGL	100.0	(50-150)
MS	Indeno(1,2,3,c,d)Pyrene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	110.500	105.000	UGL	5.1	(0-20)
LCS1	Isophorone	2	2.13	UGL	106.5	(70-130)
LCS2	Isophorone	2	2.16	UGL	108.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MRLHI	Isophorone	0.1	0.12	UGL	120.0	(50-150)
MS	Isophorone	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Isophorone	106.500	108.000	UGL	1.4	(0-20)
LCS1	Lindane	2	2.00	UGL	100.0	(70-130)
LCS2	Lindane	2	1.95	UGL	97.5	(70-130)
MBLK	Lindane	ND	<0.04	UGL		

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MRLHI	Lindane	0.1	0.12	UGL	120.0	(50-150)
MS	Lindane	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Lindane	100.000	97.500	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.22	UGL	111.0	(70-130)
LCS2	Methoxychlor	2	2.20	UGL	110.0	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MRLHI	Methoxychlor	0.1	0.070	UGL	70.0	(50-150)
MS	Methoxychlor	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Methoxychlor	111.000	110.000	UGL	0.9	(0-20)
LCS1	Metribuzin	2	2.17	UGL	108.5	(70-130)
LCS2	Metribuzin	2	2.16	UGL	108.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLHI	Metribuzin	0.1	0.090	UGL	90.0	(50-150)
MS	Metribuzin	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Metribuzin	108.500	108.000	UGL	0.5	(0-20)
LCS1	Malathion	2	2.32	UGL	116.0	(70-130)
LCS2	Malathion	2	2.33	UGL	116.5	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MRLHI	Malathion	0.1	0.10	UGL	100.0	(50-150)
MS	Malathion	2	2.37	UGL	118.5	(70-130)
RPD_LCS	Malathion	116.000	116.500	UGL	0.4	(0-20)
LCS1	Molinate	2	2.23	UGL	111.5	(70-130)
LCS2	Molinate	2	2.26	UGL	113.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MRLHI	Molinate	0.1	0.10	UGL	100.0	(50-150)
MS	Molinate	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Molinate	111.500	113.000	UGL	1.3	(0-20)
LCS1	Metolachlor	2	2.33	UGL	116.5	(70-130)
LCS2	Metolachlor	2	2.28	UGL	114.0	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLHI	Metolachlor	0.1	0.11	UGL	110.0	(50-150)
MS	Metolachlor	2	2.34	UGL	117.0	(70-130)
RPD_LCS	Metolachlor	116.500	114.000	UGL	2.2	(0-20)
LCS1	Naphthalene	2	2.10	UGL	105.0	(70-130)
LCS2	Naphthalene	2	2.10	UGL	105.0	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		

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MRLHI	Naphthalene	0.1	0.10	UGL	100.0	(50-150)
MS	Naphthalene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Naphthalene	105.000	105.000	UGL	0.0	(0-20)
LCS1	trans-Nonachlor	2	2.23	UGL	111.5	(70-130)
LCS2	trans-Nonachlor	2	2.25	UGL	112.5	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MRLHI	trans-Nonachlor	0.1	0.10	UGL	100.0	(50-150)
MS	trans-Nonachlor	2	2.09	UGL	104.5	(70-130)
RPD_LCS	trans-Nonachlor	111.500	112.500	UGL	0.9	(0-20)
LCS1	Pentachlorophenol	8	6.37	UGL	79.6	(70-130)
LCS2	Pentachlorophenol	8	5.72	UGL	71.5	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MRLHI	Pentachlorophenol	1.2	0.79	UGL	65.8	(50-150)
MS	Pentachlorophenol	8	7.76	UGL	97.0	(70-130)
RPD_LCS	Pentachlorophenol	79.625	71.500	UGL	10.8	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.58	UGL	114.5	(70-130)
LCS2	Permethrin (mixed isomers)	4	4.40	UGL	110.0	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MRLHI	Permethrin (mixed isomers)	0.2	0.13	UGL	65.0	(50-150)
MS	Permethrin (mixed isomers)	4	4.45	UGL	111.2	(70-130)
RPD_LCS	Permethrin (mixed isomers)	114.500	110.000	UGL	4.0	(0-20)
LCS1	Phenanthrene	2	2.10	UGL	105.0	(70-130)
LCS2	Phenanthrene	2	2.09	UGL	104.5	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLHI	Phenanthrene	0.1	0.10	UGL	100.0	(50-150)
MS	Phenanthrene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Phenanthrene	105.000	104.500	UGL	0.5	(0-20)
LCS1	Propachlor	2	2.07	UGL	103.5	(70-130)
LCS2	Propachlor	2	1.97	UGL	98.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLHI	Propachlor	0.1	0.12	UGL	120.0	(50-150)
MS	Propachlor	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Propachlor	103.500	98.500	UGL	5.0	(0-20)
LCS1	Parathion	2	2.35	UGL	117.5	(70-130)
LCS2	Parathion	2	2.21	UGL	110.5	(70-130)
MBLK	Parathion	ND	<0.1	UGL		

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MRLHI	Parathion	0.1	0.080	UGL	80.0	(50-150)
MS	Parathion	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Parathion	117.500	110.500	UGL	6.1	(0-20)
LCS1	Pyrene	2	2.26	UGL	113.0	(70-130)
LCS2	Pyrene	2	2.23	UGL	111.5	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MRLHI	Pyrene	0.1	0.10	UGL	100.0	(50-150)
MS	Pyrene	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Pyrene	113.000	111.500	UGL	1.3	(0-20)
LCS1	Simazine	2	2.02	UGL	101.0	(70-130)
LCS2	Simazine	2	2.00	UGL	100.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MRLHI	Simazine	0.1	0.10	UGL	100.0	(50-150)
MS	Simazine	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Simazine	101.000	100.000	UGL	1.0	(0-20)
LCS1	Perylene-d12	100	96	%R	96.0	(70-130)
LCS2	Perylene-d12	100	93	%R	93.0	(70-130)
MBLK	Perylene-d12	100	78	%R	78.0	
MRLHI	Perylene-d12	100	86	%R	86.0	(70-130)
MS	Perylene-d12	100	96	%R	96.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	102	%R	102.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	103	%R	103.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	
MRLHI	1,3-dimethyl-2-nitrobenzene	100	102	%R	102.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	104	%R	104.0	(70-130)
LCS1	Triphenylphosphate	100	109	%R	109.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	107	%R	107.0	
MRLHI	Triphenylphosphate	100	101	%R	101.0	(70-130)
MS	Triphenylphosphate	100	108	%R	108.0	(70-130)
LCS1	Thiobencarb	2	2.24	UGL	112.0	(70-130)
LCS2	Thiobencarb	2	2.27	UGL	113.5	(70-130)
MBLK	Thiobencarb	ND	<0.2	UGL		
MRLHI	Thiobencarb	0.1	0.11	UGL	110.0	(50-150)
MS	Thiobencarb	2	2.31	UGL	115.5	(70-130)
RPD_LCS	Thiobencarb	112.000	113.500	UGL	1.3	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Terbacil	2	2.15	UGL	107.5	(70-130)
LCS2	Terbacil	2	2.15	UGL	107.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MRLHI	Terbacil	0.1	0.090	UGL	90.0	(50-150)
MS	Terbacil	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Terbacil	107.500	107.500	UGL	0.0	(0-20)
LCS1	Trifluralin	2	2.30	UGL	115.0	(70-130)
LCS2	Trifluralin	2	2.29	UGL	114.5	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MRLHI	Trifluralin	0.1	0.10	UGL	100.0	(50-150)
MS	Trifluralin	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Trifluralin	115.000	114.500	UGL	0.4	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

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Laboratory Report

for

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Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Mar 05 2009
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

REVISED
each sample time noted 3/5/09

ACCREDITED IN ACCORDANCE WITH nelac
01114CA

Report#: 244875
Project: RECLAIMED

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Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 10 page[s].

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ACKNOWLEDGMENT OF SAMPLES RECEIVED

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Customer Code: LOCUS
Group#: 244875
Project#: RECLAIMED
Proj Mgr: Joseph A. Ureno
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The following samples were received from you on **06/20/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2806200005	SCRWA-B 2514F	EDTASUB	Water	17-jun-2008 11:30:00
2806200006	SJ/SC-C 2514C	EDTASUB	Water	17-jun-2008 16:00:00
2806200008	DI-C 2514K	EDTASUB	Water	17-jun-2008 16:00:00
2806200009	SCRWA-C 2514G	EDTASUB	Water	17-jun-2008 16:40:00
2806200010	SCRWA-D 2514H	EDTASUB	Water	18-jun-2008 10:00:00
2806200011	SJ/SC-C 2514C	@NDMA	Water	17-jun-2008 16:00:00
2902060007	SCRWA-D 2514H	@NDMA	Water	17-jun-2008 16:00:00
2902060008	DI-C 2514K	@NDMA	Water	17-jun-2008 16:00:00
2902060009	SCRWA-C 2514G	@NDMA	Water	17-jun-2008 16:40:00
2902060010	SCRWA-B 2514F	@PFC	Water	16-jun-2008 14:50:00
2902060011	SJ/SC-D 2514D	@PFC	Water	17-jun-2008 15:00:00
2902060012	SJ/SC-C 2514C	@PFC	Water	17-jun-2008 16:00:00
2902060013	DI-C 2514K	@PFC	Water	17-jun-2008 16:00:00
2902060014	SCRWA-C 2514G	@PFC	Water	17-jun-2008 16:40:00
2902060015	SCRWA-D 2514H	@PFC	Water	18-jun-2008 10:00:00

Test Acronym Description

Test Acronym	Description

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
Group#: 244875
Project#: RECLAIMED
Proj Mgr: Joseph A. Ureno
Phone: 626-386-1116

Test Acronym Description

Test Acronym	Description
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract

5°c Iced

244875

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
SAMPLERS: Vector (PRINT)
(SIGN)
PROJECT NUMBER: 27011-07-3200
RECORDER: (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F. Other 125 mL Glass]

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinsate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
1. Standard
2. 48 Hour
[✓ 3. 24 Hour]
4. Other

ANALYTICAL LAB: MWH Laboratories

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromho/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO₃	HCL	Thio	Field Filtered (check)	ANALYSIS REQUESTED: EDTA	NDMA	DEC							TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	6/17	11 30	SCRWA-B 2514F –				F	G	X					X									3						
2	6/17	16:00	SS/SC-C 2514C –				F	G	X					X															
3	6/17	16:00	DI-C 2514K –				F	G	X					X															
4	6/17	16:40	SCRWA-C 2514G +				F	G	X					X															
5	6/18	10 00	SCRWA-D 2514H				F	G	X					X															
6	6/17	16 00	SS/SC-C 2514C +				B	G				X			X														
7	6/17	16:00	SCRWA D 2514H +				B	G				X			X														
8	6/17	16:00	DI-C 2514K –				B	G				X			X														
9	6/17	16 40	SCRWA-C 2514G +				B	G				X			X														
10	6/16	17:50	SCRWA-B 2514F +				F	G								X											125mL Bottle		
11	~~[illegible]~~	~~[illegible]~~	SCRWA-B 2514F +				B	G						X															
12	6/17	15 00	SS/SC-D 2514D +				F	G								X											125 mL Bottle		
13	6/17	16:00	SS/SC-C 2514C +				F	G								X													
14	6/17	16:00	DI-C 2514K +				F	G								X													
15	6/17	16:40	SCRWA-C 2514G +				F	G								X													
16	6/18	10:00	SCRWA-D 2514H +				F	G								X													

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
		06/18/08	08:55
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Ice box		Susan Steward					

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 0/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#244875

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
20-jun-2008 09:10:27

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2806200005	**SCRWA-B 2514F**				
06/26/08	EDTA by Ion Chrom-Subcontract		121		ug/l	100
	2806200006	**SJ/SC-C 2514C**				
06/26/08	EDTA by Ion Chrom-Subcontract		117		ug/l	100
	2806200008	**DI-C 2514K**				
	2806200009	**SCRWA-C 2514G**				
	2806200010	**SCRWA-D 2514H**				
06/26/08	EDTA by Ion Chrom-Subcontract		237		ug/l	100
	2806200011	**SJ/SC-C 2514C**				
07/15/08	N-Nitroso dimethylamine (NDMA)		327		ng/l	8.0
	2902060007	**SCRWA-D 2514H**				
07/17/08	N-Nitroso dimethylamine (NDMA)		5.4		ng/l	2.0
	2902060008	**DI-C 2514K**				
07/11/08	N-Nitroso dimethylamine (NDMA)		7.8		ng/l	2.0
	2902060009	**SCRWA-C 2514G**				

SUMMARY OF POSITIVE DATA ONLY.

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Monrovia, California 91016-3629
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Fax: 626 386 1101
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Laboratory
Hits Report
#244875

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
20-jun-2008 09:10:27

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2902060009	**SCRWA-C 2514G**				
07/11/08	N-Nitroso dimethylamine (NDMA)		6.0		ng/l	2.0
	2902060010	**SCRWA-B 2514F**				
07/05/08	Perfluoro octanoic acid - PFOA		77		ng/l	20
	2902060011	**SJ/SC-D 2514D**				
07/05/08	Perfluoro octanoic acid - PFOA		120		ng/l	20
	2902060012	**SJ/SC-C 2514C**				
07/05/08	Perfluoro octanesulfonate-PFOS		51		ng/l	50
07/05/08	Perfluoro octanoic acid - PFOA		80		ng/l	20
	2902060013	**DI-C 2514K**				
	2902060014	**SCRWA-C 2514G**				
	2902060015	**SCRWA-D 2514H**				
07/05/08	Perfluoro octanoic acid - PFOA		120		ng/l	20

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory
Data Report
#244875

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
06/20/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SCRWA-B 2514F (2806200005) Sampled on 06/17/08 11:30								
	06/26/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	121	ug/l	100	1
SJ/SC-C 2514C (2806200006) Sampled on 06/17/08 16:00								
	06/26/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	117	ug/l	100	1
DI-C 2514K (2806200008) Sampled on 06/17/08 16:00								
	06/26/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
SCRWA-C 2514G (2806200009) Sampled on 06/17/08 16:40								
	06/26/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
SCRWA-D 2514H (2806200010) Sampled on 06/18/08 10:00								
	06/26/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	237	ug/l	100	1
SJ/SC-C 2514C (2806200011) Sampled on 06/17/08 16:00								
			N-Nitroso dimethylamine (NDMA)					
06/23/08	07/15/08 00:00	473792	(EPA 521/1625	) N-Nitroso dimethylamine (NDMA)	327	ng/l	8.0	4
			(EPA 521/1625	) NDMA-D6(50-150)-Int Std	76	% Rec		
SCRWA-D 2514H (2902060007) Sampled on 06/17/08 16:00								
			N-Nitroso dimethylamine (NDMA)					
06/23/08	07/17/08 00:00	473792	(EPA 521/1625	) N-Nitroso dimethylamine (NDMA)	5.4	ng/l	2.0	1
			(EPA 521/1625	) NDMA-D6(50-150)-Int Std	87	% Rec		

Locus Technologies
(continued)

DI-C 2514K (2902060008) Sampled on 06/17/08 16:00

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/23/08	07/11/08 00:00	473792	(EPA 521/1625)	N-Nitroso dimethylamine (NDMA)	7.8	ng/l	2.0	1
			(EPA 521/1625)	NDMA-D6(50-150)-Int Std	72	% Rec		

SCRWA-C 2514G (2902060009) Sampled on 06/17/08 16:40

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/23/08	07/11/08 00:00	473792	(EPA 521/1625)	N-Nitroso dimethylamine (NDMA)	6.0	ng/l	2.0	1
			(EPA 521/1625)	NDMA-D6(50-150)-Int Std	79	% Rec		

SCRWA-B 2514F (2902060010) Sampled on 06/16/08 14:50

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanoic acid - PFOA	77	ng/l	20	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	123	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		

SJ/SC-D 2514D (2902060011) Sampled on 06/17/08 15:00

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanoic acid - PFOA	120	ng/l	20	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	117	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution

SJ/SC-C 2514C (2902060012) Sampled on 06/17/08 16:00

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanoic acid - PFOA	80	ng/l	20	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanesulfonate-PFOS	51	ng/l	50	1
			(MWH PFC)	PFBA-C13	NA	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		
			(MWH PFC)	PFOA-C13	115	% Rec		

DI-C 2514K (2902060013) Sampled on 06/17/08 16:00

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFBA-C13	NA	% Rec		
			(MWH PFC)	PFOA-C13	104	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		

SCRWA-C 2514G (2902060014) Sampled on 06/17/08 16:40

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	118	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		

Locus Technologies
(continued)

SCRWA-D 2514H (2902060015) Sampled on 06/18/08 10:00

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanoic acid - PFOA	120	ng/l	20	1
	07/05/08 00:00	475299	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	120	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		

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Report
Comments
#244875

Group Comments

Analytical results for EDTA are submitted by Metrohm-Peak, Inc. Houston, TX

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Laboratory
QC Summary
#244875

Locus Technologies

QC Ref #473792 - N-Nitroso dimethylamine (NDMA) Analysis Date: 07/15/2008

2806200011	SJ/SC-C 2514C	Analyzed by: dlo
2902060007	SCRWA-D 2514H	Analyzed by: dlo
2902060008	DI-C 2514K	Analyzed by: dlo
2902060009	SCRWA-C 2514G	Analyzed by: dlo

QC Ref #475299 - Perfluorinated compounds Analysis Date: 07/05/2008

2902060010	SCRWA-B 2514F	Analyzed by: lhz
2902060011	SJ/SC-D 2514D	Analyzed by: lhz
2902060012	SJ/SC-C 2514C	Analyzed by: lhz
2902060013	DI-C 2514K	Analyzed by: lhz
2902060014	SCRWA-C 2514G	Analyzed by: lhz
2902060015	SCRWA-D 2514H	Analyzed by: lhz

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Laboratory
QC Report
#244875

Locus Technologies

QC Ref #473792 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 29	06230002	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	1.69	NGL	84.5	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	1.67	NGL	83.5	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	10.2	NGL	102.0	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	9.87	NGL	98.7	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	84.500	83.500	NGL	1.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	102.000	98.700	NGL	3.3	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	96	%R	96.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	98	%R	98.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	66	%R	66.0		
MS	NDMA-d6(Internal Standard)	100	84	%R	84.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	83	%R	83.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	96.000	98.000	%R	2.1	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	84.000	83.000	%R	1.2	(0-20)	
LCS1	N-NDPA-d14- Surrogate	100	ND	%R		(71-145)	
LCS2	N-NDPA-d14- Surrogate	100	ND	%R		(71-145)	
MBLK	N-NDPA-d14- Surrogate	100	<0	%R			
MS	N-NDPA-d14- Surrogate	100	ND	%R		(71-145)	
MSD	N-NDPA-d14- Surrogate	100	ND	%R		(71-145)	

QC Ref #475299 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	20	24.4	NGL	122.0	(50-150)	
LCS2	Perfluoro butanoic acid- PFBA	50	53.7	NGL	107.4	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	114	NGL	114.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
LCS1	Perfluoro octanoic acid - PFOA	20	19.0	NGL	95.0	(50-150)	
LCS2	Perfluoro octanoic acid - PFOA	50	58.8	NGL	117.6	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	89.0	NGL	89.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Perfluoro octanesulfonate-PFOS	20	25.6	NGL	128.0	(50-150)
LCS2	Perfluoro octanesulfonate-PFOS	50	52.0	NGL	104.0	(70-130)
LCS3	Perfluoro octanesulfonate-PFOS	100	97.9	NGL	97.9	(70-130)
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL		
LCS1	Internal Standard	100	112	%R	112.0	(80-120)
LCS2	Internal Standard	100	108	%R	108.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	98.0	%R		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Metrohm-Peak, LLC

Locus

MWH Laboratories - Monrovia, CA
Lab Report 2008-2739 thru 2742
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 6-26-08 & 6-27-08
June 27, 2008

MP ID	Sample	EDTA mg/L	NTA mg/L
2739	2806190658 Project# 244837	< 0.100	< 0.100
2740	2806190677 Project# 244844	< 0.100	< 0.100
2741	2806190064 Project# 244689	< 0.100	< 0.100
2742-1	2806200005 Project# 244875	0.121	< 0.100
2742-2	2806200006 Project# 244875	0.117	< 0.100
2742-3	2806200008 Project# 244875	< 0.100	< 0.100
2742-4	2806200009 Project# 244875	< 0.100	< 0.100
2742-5	2806200010 Project# 244875	0.237	< 0.100
2742-5 Dup	2806200010 Project# 244875 Dup	0.219	< 0.100
	Mean	0.228	< 0.100
	QC	0.508	0.512
	QC Value	0.500	0.512
	% Recovery	101.600	100.000
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

CHECKED AUG 07 2008

Report by:

MWH Laboratories
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Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

REVISED

DATE OF ISSUE
Apr 10 2009
MWH LABORATORIES

01114CA

JAU Joseph A Ureno
Project Manager

Report#: 244538
Project: RECLAIMED
PO#: 27011-07-320

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Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report, totaling 52 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 244538
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **06/18/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2806180022	SJ/SC-C 2514C	@525PLUS @PFC EDTASUB NTASUB	Water	17-jun-2008 13:00:00
2806180023	SJ/SC-D 2514D	@525PLUS @PFC EDTASUB NTASUB	Water	17-jun-2008 13:00:00
2806180024	SCRWA D 2514H	@525PLUS @PFC EDTASUB NTASUB	Water	17-jun-2008 13:00:00
2806180025	SCRWA C 2514G	@525PLUS @PFC EDTASUB NTASUB	Water	17-jun-2008 13:00:00
2806180026	DI-C 2514K	@525PLUS @PFC EDTASUB NTASUB	Water	17-jun-2008 13:00:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

6° ON ICE

244538

1 of 1

G. 125ml poly

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test

PROJECT NUMBER: 27011-07-3200

RECORDER: ______ (SIGN)

SAMPLERS: Susan Stewart (PRINT)

Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other glass 125 ml

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB: MWH Laboratories

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO3	HCL	Field Filtered (check)	NTA	EDTA	525 Plus	PFC	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	~~6/16~~	~~1300~~	~~D~~																				
2	6/17	1300	SJ/SC C 2514-C				F	C					X	X			3	28day					
3	6/17		SJ/SC-D 2514D				F	G					X	X									
4			SCRWAD 2514H				F	G					X	X									
5			SCRWAC 2514G				F	G					X	X									
6			DI-C 2514K				F	G					X	X									
7			SJ/SC-C 2514 C				F	G					X	X									
8			SJ/SC-D 2514 D				B	G							X			14day					
9			SCRWA D 2514H				B	G							X								
10			SCRWA C 2514G				B	G							X								
11			DI-C 2514K				B	G							X								
12			SJ/SC-C C				B	G							X								
13			SJ/SC-D D				G	G								X		14day					
14			SCRWA-C G				G	G								X							
15			SCRWA-D H				G	G								X							
16			SCRWAK K				G G	G G								X X							

NOTES / MISCELLANEOUS

project # 27011-07-3200 (Locus)
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature) Susan Stewart	Received By: (Signature)	Date 6/18/08	Time 9:30
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Icechest		Susan Stewart	6/17/08				

Send Lab Results to (Name): Norman Wong (Check Office Below)

Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive
Suite 100
Monrovia, California 91016-3629
Tel: 626 568 6400
Fax: 626 568 6324
1 800 566 LABS (1 800 566 5227)

Report Comments #244538

Group Comments

Surrogate (perylene-d12) recovery for sample D-IC 2514K (2806180026) in EPA 525.2 was low and compounds associated with this surrogate have been flagged (S6). However, data is acceptable since re-analysis concerns the surrogate recovery was likely a matrix interference and other surrogate/QC recoveries did meet method acceptance limits. MS recoveries for DEHP and Butylbenzene were also high, but the MS was not a Locus Technologies sample.

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1 800 566 LABS (1 800 566 5227)

**Laboratory
Hits Report
#244538**

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
18-jun-2008 09:41:34

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2806180022	**SJ/SC-C 2514C**				
07/05/08	Perfluoro butanoic acid- PFBA		940		ng/l	50
07/05/08	Perfluoro octanesulfonate-PFOS		572		ng/l	50
07/05/08	Perfluoro octanoic acid - PFOA		325		ng/l	20
06/20/08	EDTA by Ion Chrom-Subcontract		147		ug/l	100
	2806180023	**SJ/SC-D 2514D**				
07/05/08	Perfluoro octanoic acid - PFOA		73		ng/l	20
06/20/08	EDTA by Ion Chrom-Subcontract		174		ug/l	100
	2806180024	**SCRWA D 2514H**				
07/05/08	Perfluoro octanoic acid - PFOA		99		ng/l	20
06/20/08	EDTA by Ion Chrom-Subcontract		242		ug/l	100
	2806180025	**SCRWA C 2514G**				
07/05/08	Perfluoro octanoic acid - PFOA		108		ng/l	20
06/20/08	EDTA by Ion Chrom-Subcontract		236		ug/l	100
	2806180026	**DI-C 2514K**				

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive
Suite 100
Monrovia, California 91016-3629
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Fax: 626 568 6324
1 800 566 LABS (1 800 566 5227)

Laboratory Data Report #244538

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
06/18/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SJ/SC-C 2514C (2806180022)				**Sampled on 06/17/08 13:00**				
	06/20/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**147**	**ug/l**	**100**	**1**
	06/20/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**
			525 Semivolatiles by GC/MS					
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
06/30/08	07/11/08 12:23	438708	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	110	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	84	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	100	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 05:28	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	940	ng/l	50	1
	07/05/08 05:28	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	325	ng/l	20	1
	07/05/08 05:28	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	572	ng/l	50	1
			(MWH PFC)	PFOA-C13	73	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		

SJ/SC-D 2514D (2806180023) Sampled on 06/17/08 13:00

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	06/20/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**174**	**ug/l**	**100**	**1**
	06/20/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Endrin	ND	ug/l	0.2	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
06/30/08	07/09/08 21:32	437591	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	105	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	93	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	114	% Rec		

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 05:37	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 05:37	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	73	ng/l	20	1
	07/05/08 05:37	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	112	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		
			(MWH PFC)	PFOS-C13	NA	% Rec		

SCRWA D 2514H (2806180024) Sampled on 06/17/08 13:00

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	06/20/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**242**	**ug/l**	**100**	**1**
	06/20/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Lindane	ND	ug/l	0.04	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
06/30/08	07/11/08 12:46	438707	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	88	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	106	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	103	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 05:38	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 05:38	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	99	ng/l	20	1
	07/05/08 05:38	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOS-C13	NA	% Rec		
			(MWH PFC)	PFOA-C13	107	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		

SCRWA C 2514G (2806180025) Sampled on 06/17/08 13:00

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	06/20/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**236**	**ug/l**	**100**	**1**
	06/20/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
06/30/08	07/11/08 01:09	438707	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	101	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	109	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	89	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 05:39	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 05:39	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	108	ng/l	20	1
	07/05/08 05:39	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOS-C13	NA	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		
			(MWH PFC)	PFOA-C13	71	% Rec		

DI-C 2514K (2806180026) Sampled on 06/17/08 13:00

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	06/20/08 00:00		**(EPA 300)**	**EDTA by Ion Chrom-Subcontract**	**ND**	**ug/l**	**100**	**1**
	06/20/08 00:00		**(EPA 300)**	**NTA by Ion Chrom- Subcontract**	**ND**	**ug/l**	**100**	**1**

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Benzo(g,h,i)Perylene	ND(S6)	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Dibenz(a,h)Anthracene	ND(S6)	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND(S6)	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
06/30/08	07/11/08 01:33	438707	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	98	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	108	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	68	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	07/05/08 05:39	441250	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	07/05/08 05:39	441250	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	07/05/08 05:39	441250	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOS-C13	NA	% Rec		
			(MWH PFC)	PFOA-C13	112	% Rec		
			(MWH PFC)	PFBA-C13	NA	% Rec		

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Laboratory
QC Summary
#244538

Locus Technologies

QC Ref #437591 - 525 Semivolatiles by GC/MS Analysis Date: 07/09/2008

2806180023	SJ/SC-D 2514D

QC Ref #438707 - 525 Semivolatiles by GC/MS Analysis Date: 07/11/2008

2806180024	SCRWA D 2514H
2806180025	SCRWA C 2514G
2806180026	DI-C 2514K

QC Ref #438708 - 525 Semivolatiles by GC/MS Analysis Date: 07/11/2008

2806180022	SJ/SC-C 2514C

QC Ref #441250 - Perfluorinated compounds Analysis Date: 07/05/2008

2806180022	SJ/SC-C 2514C
2806180023	SJ/SC-D 2514D
2806180024	SCRWA D 2514H
2806180025	SCRWA C 2514G
2806180026	DI-C 2514K

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Laboratory
QC Report
#244538

Locus Technologies

QC Ref #437591 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.68	UGL	84.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.66	UGL	83.0	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	84.000	93.500	UGL	10.7	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.73	UGL	86.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.88	UGL	94.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.63	UGL	81.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	86.500	94.000	UGL	8.3	(0-20)	
LCS1	Alpha-BHC	2	2.17	UGL	108.5	(70-130)	
LCS2	Alpha-BHC	2	2.18	UGL	109.0	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			
MS	Alpha-BHC	2	2.09	UGL	104.5	(70-130)	
LCS1	alpha-Chlordane	2	2.24	UGL	112.0	(70-130)	
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)	
MBLK	alpha-Chlordane	ND	<0.05	UGL			
MRLMD	alpha-Chlordane	0.05	0.060	UGL	120.0	(50-150)	
MS	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)	
RPD_LCS	alpha-Chlordane	112.000	104.000	UGL	7.4	(0-20)	
LCS1	Diazinon (Qualitative)	2	1.93	UGL	96.5	(70-130)	
LCS2	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)	
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL			
MS	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)	
RPD_LCS	Diazinon (Qualitative)	96.500	101.500	UGL	5.1	(0-20)	
MS	Spiked sample	Lab # 28	06270194	NONE		(0-0)	
LCS1	Acenaphthene	2	2.09	UGL	104.5	(70-130)	
LCS2	Acenaphthene	2	2.12	UGL	106.0	(70-130)	
MBLK	Acenaphthene	ND	<0.1	UGL			
MS	Acenaphthene	2	2.08	UGL	104.0	(70-130)	
RPD_LCS	Acenaphthene	104.500	106.000	UGL	1.4	(0-20)	
LCS1	Acenaphthylene	2	2.06	UGL	103.0	(70-130)	
LCS2	Acenaphthylene	2	2.11	UGL	105.5	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Acenaphthylene	103.000	105.500	UGL	2.4	(0-20)
LCS1	Acetochlor	2	1.98	UGL	99.0	(70-130)
LCS2	Acetochlor	2	2.10	UGL	105.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Acetochlor	99.000	105.000	UGL	5.9	(0-20)
LCS1	Alachlor	2	2.04	UGL	102.0	(70-130)
LCS2	Alachlor	2	2.10	UGL	105.0	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLMD	Alachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Alachlor	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Alachlor	102.000	105.000	UGL	2.9	(0-20)
LCS1	Aldrin	2	1.86	UGL	93.0	(70-130)
LCS2	Aldrin	2	1.84	UGL	92.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MRLMD	Aldrin	0.05	0.060	UGL	120.0	(50-150)
MS	Aldrin	2	1.76	UGL	88.0	(70-130)
RPD_LCS	Aldrin	93.000	92.000	UGL	1.1	(0-20)
LCS1	Anthracene	2	1.99	UGL	99.5	(70-130)
LCS2	Anthracene	2	1.75	UGL	87.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLMD	Anthracene	0.05	0.030	UGL	60.0	(50-150)
MS	Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Anthracene	99.500	87.500	UGL	12.8	(0-20)
LCS1	Atrazine	2	2.01	UGL	100.5	(70-130)
LCS2	Atrazine	2	2.22	UGL	111.0	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MRLMD	Atrazine	0.05	0.070	UGL	140.0	(50-150)
MS	Atrazine	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Atrazine	100.500	111.000	UGL	9.9	(0-20)
LCS1	Benz(a)Anthracene	2	1.86	UGL	93.0	(70-130)
LCS2	Benz(a)Anthracene	2	2.01	UGL	100.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLMD	Benz(a)Anthracene	0.05	0.060	UGL	120.0	(50-150)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Benz(a)Anthracene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Benz(a)Anthracene	93.000	100.500	UGL	7.8	(0-20)
LCS1	Benzo(a)pyrene	2	2.03	UGL	101.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.00	UGL	100.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLMD	Benzo(a)pyrene	0.05	0.030	UGL	60.0	(50-150)
MS	Benzo(a)pyrene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Benzo(a)pyrene	101.500	100.000	UGL	1.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLMD	Benzo(b)Fluoranthene	0.05	0.060	UGL	120.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	104.500	107.000	UGL	2.4	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	2.17	UGL	108.5	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	2.16	UGL	108.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLMD	Benzo(g,h,i)Perylene	0.05	0.050	UGL	100.0	(50-150)
MS	Benzo(g,h,i)Perylene	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	108.500	108.000	UGL	0.5	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.08	UGL	104.0	(70-130)
LCS2	Benzo(k)Fluoranthene	2	2.09	UGL	104.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLMD	Benzo(k)Fluoranthene	0.05	0.050	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	104.000	104.500	UGL	0.5	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	2.08	UGL	104.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.98	UGL	99.0	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	5.57	UGL	278.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	104.000	99.000	UGL	4.9	(0-20)
LCS1	Beta-BHC	2	2.10	UGL	105.0	(70-130)
LCS2	Beta-BHC	2	2.37	UGL	118.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.24	UGL	112.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.16	UGL	108.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Butylbenzylphthalate	2	2.29	UGL	114.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	4.73	UGL	236.5	(70-130)
RPD_LCS	Butylbenzylphthalate	108.000	114.500	UGL	5.8	(0-20)
LCS1	Bromacil	2	2.05	UGL	102.5	(70-130)
LCS2	Bromacil	2	2.23	UGL	111.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Bromacil	102.500	111.500	UGL	8.4	(0-20)
LCS1	Butachlor	2	2.21	UGL	110.5	(70-130)
LCS2	Butachlor	2	2.25	UGL	112.5	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLMD	Butachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Butachlor	2	2.39	UGL	119.5	(70-130)
RPD_LCS	Butachlor	110.500	112.500	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.44	UGL	72.0	(45-137)
LCS2	Caffeine by method 525mod	2	1.49	UGL	74.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MRLMD	Caffeine by method 525mod	0.05	0.050	UGL	100.0	(50-150)
MS	Caffeine by method 525mod	2	1.35	UGL	67.5	(46-144)
RPD_LCS	Caffeine by method 525mod	72.000	74.500	UGL	3.4	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.17	UGL	108.5	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MS	Chlorothalonil(Draconil,Bravo)	2	2.10	UGL	105.0	(70-130)
LCS1	Chrysene	2	2.07	UGL	103.5	(70-130)
LCS2	Chrysene	2	2.09	UGL	104.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLMD	Chrysene	0.05	0.060	UGL	120.0	(50-150)
MS	Chrysene	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Chrysene	103.500	104.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.14	UGL	107.0	(70-130)
LCS2	Chlorobenzilate	2	2.26	UGL	113.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Chlorobenzilate	107.000	113.000	UGL	5.5	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Chloroneb	2	2.04	UGL	102.0	(70-130)
LCS2	Chloroneb	2	2.14	UGL	107.0	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Chloroneb	102.000	107.000	UGL	4.8	(0-20)
LCS1	Delta-BHC	2	2.05	UGL	102.5	(70-130)
LCS2	Delta-BHC	2	2.13	UGL	106.5	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.10	UGL	105.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.12	UGL	106.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.18	UGL	109.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLMD	Dibenz(a,h)Anthracene	0.05	0.050	UGL	100.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	106.000	109.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
LCS2	4,4'-DDD	2	2.15	UGL	107.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.17	UGL	108.5	(70-130)
RPD_LCS	4,4'-DDD	103.500	107.500	UGL	3.8	(0-20)
LCS1	4,4'-DDE	2	2.07	UGL	103.5	(70-130)
LCS2	4,4'-DDE	2	2.05	UGL	102.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	2.06	UGL	103.0	(70-130)
RPD_LCS	4,4'-DDE	103.500	102.500	UGL	1.0	(0-20)
LCS1	4,4'-DDT	2	2.01	UGL	100.5	(70-130)
LCS2	4,4'-DDT	2	2.12	UGL	106.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	2.20	UGL	110.0	(70-130)
RPD_LCS	4,4'-DDT	100.500	106.000	UGL	5.3	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.11	UGL	105.5	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.17	UGL	108.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLMD	Dichlorvos (DDVP)	0.05	0.050	UGL	100.0	(50-150)
MS	Dichlorvos (DDVP)	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	105.500	108.500	UGL	2.8	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Di-(2-Ethylhexyl)adipate	2	2.09	UGL	104.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	2.17	UGL	108.5	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	2.34	UGL	117.0	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	104.500	108.500	UGL	3.8	(0-20)
LCS1	Diethylphthalate	2	2.15	UGL	107.5	(70-130)
LCS2	Diethylphthalate	2	2.25	UGL	112.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Diethylphthalate	107.500	112.500	UGL	4.5	(0-20)
LCS1	Dieldrin	2	2.19	UGL	109.5	(70-130)
LCS2	Dieldrin	2	2.14	UGL	107.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.28	UGL	114.0	(70-130)
RPD_LCS	Dieldrin	109.500	107.000	UGL	2.3	(0-20)
LCS1	Dimethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Dimethylphthalate	2	2.20	UGL	110.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Dimethylphthalate	107.000	110.000	UGL	2.8	(0-20)
LCS1	Dimethoate	2	1.20	UGL	60.0	(35-100)
LCS2	Dimethoate	2	1.21	UGL	60.5	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	0.99	UGL	49.5	(34-111)
RPD_LCS	Dimethoate	60.000	60.500	UGL	0.8	(0-20)
LCS1	Di-n-Butylphthalate	4	4.54	UGL	113.5	(70-130)
LCS2	Di-n-Butylphthalate	4	4.58	UGL	114.5	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	4.66	UGL	116.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	113.500	114.500	UGL	0.9	(0-20)
LCS1	Di-N-octylphthalate	2	2.03	UGL	101.5	(70-130)
LCS2	Di-N-octylphthalate	2	2.06	UGL	103.0	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Di-N-octylphthalate	101.500	103.000	UGL	1.5	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.02	UGL	101.0	(70-130)

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LCS2	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLMD	Chlorpyrifos (Dursban)	0.05	0.050	UGL	100.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	101.000	103.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	2.17	UGL	108.5	(70-130)
LCS2	Endrin Aldehyde	2	2.18	UGL	109.0	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	2.28	UGL	114.0	(70-130)
LCS1	Endrin	2	1.83	UGL	91.5	(70-130)
LCS2	Endrin	2	2.01	UGL	100.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Endrin	91.500	100.500	UGL	9.4	(0-20)
LCS1	EPTC	2	2.16	UGL	108.0	(70-130)
LCS2	EPTC	2	2.12	UGL	106.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.07	UGL	103.5	(70-130)
RPD_LCS	EPTC	108.000	106.000	UGL	1.9	(0-20)
LCS1	Endosulfan I (Alpha)	2	2.08	UGL	104.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	2.25	UGL	112.5	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	2.09	UGL	104.5	(70-130)
LCS1	Endosulfan II (Beta)	2	1.94	UGL	97.0	(70-130)
LCS2	Endosulfan II (Beta)	2	2.14	UGL	107.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	2.20	UGL	110.0	(70-130)
LCS1	Endosulfan Sulfate	2	2.17	UGL	108.5	(70-130)
LCS2	Endosulfan Sulfate	2	2.29	UGL	114.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	2.19	UGL	109.5	(70-130)
LCS1	Fluoranthene	2	2.11	UGL	105.5	(70-130)
LCS2	Fluoranthene	2	2.20	UGL	110.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Fluoranthene	105.500	110.000	UGL	4.2	(0-20)

LCS1	Fluorene	2	2.10	UGL	105.0	(70-130)
LCS2	Fluorene	2	2.16	UGL	108.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MRLMD	Fluorene	0.05	0.060	UGL	120.0	(50-150)
MS	Fluorene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluorene	105.000	108.000	UGL	2.8	(0-20)
LCS1	gamma-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	gamma-Chlordane	2	2.11	UGL	105.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLMD	gamma-Chlordane	0.05	0.060	UGL	120.0	(50-150)
MS	gamma-Chlordane	2	2.12	UGL	106.0	(70-130)
RPD_LCS	gamma-Chlordane	103.000	105.500	UGL	2.4	(0-20)
LCS1	Hexachlorobenzene	2	2.13	UGL	106.5	(70-130)
LCS2	Hexachlorobenzene	2	2.10	UGL	105.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MRLMD	Hexachlorobenzene	0.15	0.18	UGL	120.0	(50-150)
MS	Hexachlorobenzene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Hexachlorobenzene	106.500	105.000	UGL	1.4	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.03	UGL	101.5	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.01	UGL	100.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLMD	Hexachlorocyclopentadiene	0.15	0.16	UGL	106.7	(50-150)
MS	Hexachlorocyclopentadiene	2	1.94	UGL	97.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	101.500	100.500	UGL	1.0	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	1.98	UGL	99.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLMD	Heptachlor	0.05	0.050	UGL	100.0	(50-150)
MS	Heptachlor	2	1.92	UGL	96.0	(70-130)
RPD_LCS	Heptachlor	99.500	99.000	UGL	0.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.08	UGL	104.0	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	2.10	UGL	105.0	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLMD	Heptachlor Epoxide (isomer B)	0.05	0.040	UGL	80.0	(50-150)
MS	Heptachlor Epoxide (isomer B)	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	104.000	105.000	UGL	1.0	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.15	UGL	107.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MRLMD	Indeno(1,2,3,c,d)Pyrene	0.05	0.050	UGL	100.0	(50-150)
MS	Indeno(1,2,3,c,d)Pyrene	2	2.19	UGL	109.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	107.500	106.000	UGL	1.4	(0-20)
LCS1	Isophorone	2	2.06	UGL	103.0	(70-130)
LCS2	Isophorone	2	2.04	UGL	102.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Isophorone	103.000	102.000	UGL	1.0	(0-20)
LCS1	Lindane	2	1.85	UGL	92.5	(70-130)
LCS2	Lindane	2	2.00	UGL	100.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLMD	Lindane	0.05	0.070	UGL	140.0	(50-150)
MS	Lindane	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Lindane	92.500	100.000	UGL	7.8	(0-20)
LCS1	Methoxychlor	2	2.14	UGL	107.0	(70-130)
LCS2	Methoxychlor	2	2.24	UGL	112.0	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Methoxychlor	107.000	112.000	UGL	4.6	(0-20)
LCS1	Metribuzin	2	2.02	UGL	101.0	(70-130)
LCS2	Metribuzin	2	1.97	UGL	98.5	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLMD	Metribuzin	0.05	0.050	UGL	100.0	(50-150)
MS	Metribuzin	2	1.92	UGL	96.0	(70-130)
RPD_LCS	Metribuzin	101.000	98.500	UGL	2.5	(0-20)
LCS1	Malathion	2	2.16	UGL	108.0	(70-130)
LCS2	Malathion	2	2.30	UGL	115.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Malathion	108.000	115.000	UGL	6.3	(0-20)
LCS1	Molinate	2	2.17	UGL	108.5	(70-130)
LCS2	Molinate	2	2.20	UGL	110.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		

MS	Molinate	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Molinate	108.500	110.000	UGL	1.4	(0-20)
LCS1	Metolachlor	2	2.18	UGL	109.0	(70-130)
LCS2	Metolachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLMD	Metolachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Metolachlor	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Metolachlor	109.000	112.000	UGL	2.7	(0-20)
LCS1	Naphthalene	2	2.07	UGL	103.5	(70-130)
LCS2	Naphthalene	2	2.03	UGL	101.5	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MS	Naphthalene	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Naphthalene	103.500	101.500	UGL	2.0	(0-20)
LCS1	trans-Nonachlor	2	2.09	UGL	104.5	(70-130)
LCS2	trans-Nonachlor	2	2.11	UGL	105.5	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MRLMD	trans-Nonachlor	0.05	0.070	UGL	140.0	(50-150)
MS	trans-Nonachlor	2	2.17	UGL	108.5	(70-130)
RPD_LCS	trans-Nonachlor	104.500	105.500	UGL	1.0	(0-20)
LCS1	Pentachlorophenol	8	9.53	UGL	119.1	(70-130)
LCS2	Pentachlorophenol	8	9.35	UGL	116.9	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	9.93	UGL	124.1	(70-130)
RPD_LCS	Pentachlorophenol	119.125	116.875	UGL	1.9	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.27	UGL	106.7	(70-130)
LCS2	Permethrin (mixed isomers)	4	4.28	UGL	107.0	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	4.31	UGL	107.7	(70-130)
RPD_LCS	Permethrin (mixed isomers)	106.750	107.000	UGL	0.2	(0-20)
LCS1	Phenanthrene	2	2.04	UGL	102.0	(70-130)
LCS2	Phenanthrene	2	2.07	UGL	103.5	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLMD	Phenanthrene	0.05	0.060	UGL	120.0	(50-150)
MS	Phenanthrene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Phenanthrene	102.000	103.500	UGL	1.5	(0-20)
LCS1	Propachlor	2	1.94	UGL	97.0	(70-130)

LCS2	Propachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLMD	Propachlor	0.05	0.070	UGL	140.0	(50-150)
MS	Propachlor	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Propachlor	97.000	101.000	UGL	4.0	(0-20)
LCS1	Parathion	2	2.23	UGL	111.5	(70-130)
LCS2	Parathion	2	2.30	UGL	115.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Parathion	111.500	115.000	UGL	3.1	(0-20)
LCS1	Pyrene	2	2.08	UGL	104.0	(70-130)
LCS2	Pyrene	2	2.13	UGL	106.5	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MRLMD	Pyrene	0.05	0.050	UGL	100.0	(50-150)
MS	Pyrene	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Pyrene	104.000	106.500	UGL	2.4	(0-20)
LCS1	Simazine	2	1.98	UGL	99.0	(70-130)
LCS2	Simazine	2	2.09	UGL	104.5	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MRLMD	Simazine	0.05	0.060	UGL	120.0	(50-150)
MS	Simazine	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Simazine	99.000	104.500	UGL	5.4	(0-20)
LCS1	Perylene-d12	100	95	%R	95.0	(70-130)
LCS2	Perylene-d12	100	96	%R	96.0	(70-130)
MBLK	Perylene-d12	100	81	%R	81.0	
MRLMD	Perylene-d12	100	79	%R	79.0	(70-130)
MS	Perylene-d12	100	97	%R	97.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	102	%R	102.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	
MRLMD	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	101	%R	101.0	(70-130)
LCS1	Triphenylphosphate	100	102	%R	102.0	(70-130)
LCS2	Triphenylphosphate	100	105	%R	105.0	(70-130)
MBLK	Triphenylphosphate	100	108	%R	108.0	
MRLMD	Triphenylphosphate	100	105	%R	105.0	(70-130)

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MS	Triphenylphosphate	100	109	%R	109.0	(70-130)
LCS1	Thiobencarb (ELAP Cert)	2	2.17	UGL	108.5	(70-130)
LCS2	Thiobencarb (ELAP Cert)	2	2.22	UGL	111.0	(70-130)
MBLK	Thiobencarb (ELAP Cert)	ND	<0.2	UGL		
MS	Thiobencarb (ELAP Cert)	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Thiobencarb (ELAP Cert)	108.500	111.000	UGL	2.3	(0-20)
LCS1	Terbacil	2	1.88	UGL	94.0	(70-130)
LCS2	Terbacil	2	2.14	UGL	107.0	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	94.000	107.000	UGL	12.9	(0-20)
LCS1	Trifluralin	2	2.18	UGL	109.0	(70-130)
LCS2	Trifluralin	2	2.25	UGL	112.5	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Trifluralin	109.000	112.500	UGL	3.2	(0-20)

QC Ref #438707 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.68	UGL	84.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.66	UGL	83.0	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	84.000	93.500	UGL	10.7	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.73	UGL	86.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.88	UGL	94.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.63	UGL	81.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	86.500	94.000	UGL	8.3	(0-20)	
LCS1	Alpha-BHC	2	2.17	UGL	108.5	(70-130)	
LCS2	Alpha-BHC	2	2.18	UGL	109.0	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			
MS	Alpha-BHC	2	2.09	UGL	104.5	(70-130)	
LCS1	alpha-Chlordane	2	2.24	UGL	112.0	(70-130)	

LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MRLMD	alpha-Chlordane	0.05	0.060	UGL	120.0	(50-150)
MS	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
RPD_LCS	alpha-Chlordane	112.000	104.000	UGL	7.4	(0-20)
LCS1	Diazinon (Qualitative)	2	1.93	UGL	96.5	(70-130)
LCS2	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
RPD_LCS	Diazinon (Qualitative)	96.500	101.500	UGL	5.1	(0-20)
MS	Spiked sample	Lab # 28	06270194	NONE		(0-0)
LCS1	Acenaphthene	2	2.09	UGL	104.5	(70-130)
LCS2	Acenaphthene	2	2.12	UGL	106.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Acenaphthene	104.500	106.000	UGL	1.4	(0-20)
LCS1	Acenaphthylene	2	2.06	UGL	103.0	(70-130)
LCS2	Acenaphthylene	2	2.11	UGL	105.5	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Acenaphthylene	103.000	105.500	UGL	2.4	(0-20)
LCS1	Acetochlor	2	1.98	UGL	99.0	(70-130)
LCS2	Acetochlor	2	2.10	UGL	105.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Acetochlor	99.000	105.000	UGL	5.9	(0-20)
LCS1	Alachlor	2	2.04	UGL	102.0	(70-130)
LCS2	Alachlor	2	2.10	UGL	105.0	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLMD	Alachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Alachlor	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Alachlor	102.000	105.000	UGL	2.9	(0-20)
LCS1	Aldrin	2	1.86	UGL	93.0	(70-130)
LCS2	Aldrin	2	1.84	UGL	92.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MRLMD	Aldrin	0.05	0.060	UGL	120.0	(50-150)

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MS	Aldrin	2	1.76	UGL	88.0	(70-130)
RPD_LCS	Aldrin	93.000	92.000	UGL	1.1	(0-20)
LCS1	Anthracene	2	1.99	UGL	99.5	(70-130)
LCS2	Anthracene	2	1.75	UGL	87.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLMD	Anthracene	0.05	0.030	UGL	60.0	(50-150)
MS	Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Anthracene	99.500	87.500	UGL	12.8	(0-20)
LCS1	Atrazine	2	2.01	UGL	100.5	(70-130)
LCS2	Atrazine	2	2.22	UGL	111.0	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MRLMD	Atrazine	0.05	0.070	UGL	140.0	(50-150)
MS	Atrazine	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Atrazine	100.500	111.000	UGL	9.9	(0-20)
LCS1	Benz(a)Anthracene	2	1.86	UGL	93.0	(70-130)
LCS2	Benz(a)Anthracene	2	2.01	UGL	100.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLMD	Benz(a)Anthracene	0.05	0.060	UGL	120.0	(50-150)
MS	Benz(a)Anthracene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Benz(a)Anthracene	93.000	100.500	UGL	7.8	(0-20)
LCS1	Benzo(a)pyrene	2	2.03	UGL	101.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.00	UGL	100.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLMD	Benzo(a)pyrene	0.05	0.030	UGL	60.0	(50-150)
MS	Benzo(a)pyrene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Benzo(a)pyrene	101.500	100.000	UGL	1.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLMD	Benzo(b)Fluoranthene	0.05	0.060	UGL	120.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	104.500	107.000	UGL	2.4	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	2.17	UGL	108.5	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	2.16	UGL	108.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLMD	Benzo(g,h,i)Perylene	0.05	0.050	UGL	100.0	(50-150)

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MS	Benzo(g,h,i)Perylene	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	108.500	108.000	UGL	0.5	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.08	UGL	104.0	(70-130)
LCS2	Benzo(k)Fluoranthene	2	2.09	UGL	104.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLMD	Benzo(k)Fluoranthene	0.05	0.050	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	104.000	104.500	UGL	0.5	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	2.08	UGL	104.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.98	UGL	99.0	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	5.57	UGL	278.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	104.000	99.000	UGL	4.9	(0-20)
LCS1	Beta-BHC	2	2.10	UGL	105.0	(70-130)
LCS2	Beta-BHC	2	2.37	UGL	118.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.24	UGL	112.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.16	UGL	108.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.29	UGL	114.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	4.73	UGL	236.5	(70-130)
RPD_LCS	Butylbenzylphthalate	108.000	114.500	UGL	5.8	(0-20)
LCS1	Bromacil	2	2.05	UGL	102.5	(70-130)
LCS2	Bromacil	2	2.23	UGL	111.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Bromacil	102.500	111.500	UGL	8.4	(0-20)
LCS1	Butachlor	2	2.21	UGL	110.5	(70-130)
LCS2	Butachlor	2	2.25	UGL	112.5	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLMD	Butachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Butachlor	2	2.39	UGL	119.5	(70-130)
RPD_LCS	Butachlor	110.500	112.500	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.44	UGL	72.0	(45-137)
LCS2	Caffeine by method 525mod	2	1.49	UGL	74.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		

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MRLMD	Caffeine by method 525mod	0.05	0.050	UGL	100.0	(50-150)
MS	Caffeine by method 525mod	2	1.35	UGL	67.5	(46-144)
RPD_LCS	Caffeine by method 525mod	72.000	74.500	UGL	3.4	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.17	UGL	108.5	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MS	Chlorothalonil(Draconil,Bravo)	2	2.10	UGL	105.0	(70-130)
LCS1	Chrysene	2	2.07	UGL	103.5	(70-130)
LCS2	Chrysene	2	2.09	UGL	104.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLMD	Chrysene	0.05	0.060	UGL	120.0	(50-150)
MS	Chrysene	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Chrysene	103.500	104.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.14	UGL	107.0	(70-130)
LCS2	Chlorobenzilate	2	2.26	UGL	113.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Chlorobenzilate	107.000	113.000	UGL	5.5	(0-20)
LCS1	Chloroneb	2	2.04	UGL	102.0	(70-130)
LCS2	Chloroneb	2	2.14	UGL	107.0	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Chloroneb	102.000	107.000	UGL	4.8	(0-20)
LCS1	Delta-BHC	2	2.05	UGL	102.5	(70-130)
LCS2	Delta-BHC	2	2.13	UGL	106.5	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.10	UGL	105.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.12	UGL	106.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.18	UGL	109.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLMD	Dibenz(a,h)Anthracene	0.05	0.050	UGL	100.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	106.000	109.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
LCS2	4,4'-DDD	2	2.15	UGL	107.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		

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MS	4,4'-DDD	2	2.17	UGL	108.5	(70-130)
RPD_LCS	4,4'-DDD	103.500	107.500	UGL	3.8	(0-20)
LCS1	4,4'-DDE	2	2.07	UGL	103.5	(70-130)
LCS2	4,4'-DDE	2	2.05	UGL	102.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	2.06	UGL	103.0	(70-130)
RPD_LCS	4,4'-DDE	103.500	102.500	UGL	1.0	(0-20)
LCS1	4,4'-DDT	2	2.01	UGL	100.5	(70-130)
LCS2	4,4'-DDT	2	2.12	UGL	106.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	2.20	UGL	110.0	(70-130)
RPD_LCS	4,4'-DDT	100.500	106.000	UGL	5.3	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.11	UGL	105.5	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.17	UGL	108.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLMD	Dichlorvos (DDVP)	0.05	0.050	UGL	100.0	(50-150)
MS	Dichlorvos (DDVP)	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	105.500	108.500	UGL	2.8	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.09	UGL	104.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	2.17	UGL	108.5	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	2.34	UGL	117.0	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	104.500	108.500	UGL	3.8	(0-20)
LCS1	Diethylphthalate	2	2.15	UGL	107.5	(70-130)
LCS2	Diethylphthalate	2	2.25	UGL	112.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Diethylphthalate	107.500	112.500	UGL	4.5	(0-20)
LCS1	Dieldrin	2	2.19	UGL	109.5	(70-130)
LCS2	Dieldrin	2	2.14	UGL	107.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.28	UGL	114.0	(70-130)
RPD_LCS	Dieldrin	109.500	107.000	UGL	2.3	(0-20)
LCS1	Dimethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Dimethylphthalate	2	2.20	UGL	110.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		

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MS	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Dimethylphthalate	107.000	110.000	UGL	2.8	(0-20)
LCS1	Dimethoate	2	1.20	UGL	60.0	(35-100)
LCS2	Dimethoate	2	1.21	UGL	60.5	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	0.99	UGL	49.5	(34-111)
RPD_LCS	Dimethoate	60.000	60.500	UGL	0.8	(0-20)
LCS1	Di-n-Butylphthalate	4	4.54	UGL	113.5	(70-130)
LCS2	Di-n-Butylphthalate	4	4.58	UGL	114.5	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	4.66	UGL	116.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	113.500	114.500	UGL	0.9	(0-20)
LCS1	Di-N-octylphthalate	2	2.03	UGL	101.5	(70-130)
LCS2	Di-N-octylphthalate	2	2.06	UGL	103.0	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Di-N-octylphthalate	101.500	103.000	UGL	1.5	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.02	UGL	101.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLMD	Chlorpyrifos (Dursban)	0.05	0.050	UGL	100.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	101.000	103.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	2.17	UGL	108.5	(70-130)
LCS2	Endrin Aldehyde	2	2.18	UGL	109.0	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	2.28	UGL	114.0	(70-130)
LCS1	Endrin	2	1.83	UGL	91.5	(70-130)
LCS2	Endrin	2	2.01	UGL	100.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Endrin	91.500	100.500	UGL	9.4	(0-20)
LCS1	EPTC	2	2.16	UGL	108.0	(70-130)
LCS2	EPTC	2	2.12	UGL	106.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.07	UGL	103.5	(70-130)

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RPD_LCS	EPTC	108.000	106.000	UGL	1.9	(0-20)
LCS1	Endosulfan I (Alpha)	2	2.08	UGL	104.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	2.25	UGL	112.5	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	2.09	UGL	104.5	(70-130)
LCS1	Endosulfan II (Beta)	2	1.94	UGL	97.0	(70-130)
LCS2	Endosulfan II (Beta)	2	2.14	UGL	107.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	2.20	UGL	110.0	(70-130)
LCS1	Endosulfan Sulfate	2	2.17	UGL	108.5	(70-130)
LCS2	Endosulfan Sulfate	2	2.29	UGL	114.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	2.19	UGL	109.5	(70-130)
LCS1	Fluoranthene	2	2.11	UGL	105.5	(70-130)
LCS2	Fluoranthene	2	2.20	UGL	110.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Fluoranthene	105.500	110.000	UGL	4.2	(0-20)
LCS1	Fluorene	2	2.10	UGL	105.0	(70-130)
LCS2	Fluorene	2	2.16	UGL	108.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MRLMD	Fluorene	0.05	0.060	UGL	120.0	(50-150)
MS	Fluorene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluorene	105.000	108.000	UGL	2.8	(0-20)
LCS1	gamma-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	gamma-Chlordane	2	2.11	UGL	105.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLMD	gamma-Chlordane	0.05	0.060	UGL	120.0	(50-150)
MS	gamma-Chlordane	2	2.12	UGL	106.0	(70-130)
RPD_LCS	gamma-Chlordane	103.000	105.500	UGL	2.4	(0-20)
LCS1	Hexachlorobenzene	2	2.13	UGL	106.5	(70-130)
LCS2	Hexachlorobenzene	2	2.10	UGL	105.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MRLMD	Hexachlorobenzene	0.15	0.18	UGL	120.0	(50-150)
MS	Hexachlorobenzene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Hexachlorobenzene	106.500	105.000	UGL	1.4	(0-20)

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LCS1	Hexachlorocyclopentadiene	2	2.03	UGL	101.5	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.01	UGL	100.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLMD	Hexachlorocyclopentadiene	0.15	0.16	UGL	106.7	(50-150)
MS	Hexachlorocyclopentadiene	2	1.94	UGL	97.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	101.500	100.500	UGL	1.0	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	1.98	UGL	99.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLMD	Heptachlor	0.05	0.050	UGL	100.0	(50-150)
MS	Heptachlor	2	1.92	UGL	96.0	(70-130)
RPD_LCS	Heptachlor	99.500	99.000	UGL	0.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.08	UGL	104.0	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	2.10	UGL	105.0	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLMD	Heptachlor Epoxide (isomer B)	0.05	0.040	UGL	80.0	(50-150)
MS	Heptachlor Epoxide (isomer B)	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	104.000	105.000	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.15	UGL	107.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MRLMD	Indeno(1,2,3,c,d)Pyrene	0.05	0.050	UGL	100.0	(50-150)
MS	Indeno(1,2,3,c,d)Pyrene	2	2.19	UGL	109.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	107.500	106.000	UGL	1.4	(0-20)
LCS1	Isophorone	2	2.06	UGL	103.0	(70-130)
LCS2	Isophorone	2	2.04	UGL	102.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Isophorone	103.000	102.000	UGL	1.0	(0-20)
LCS1	Lindane	2	1.85	UGL	92.5	(70-130)
LCS2	Lindane	2	2.00	UGL	100.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLMD	Lindane	0.05	0.070	UGL	140.0	(50-150)
MS	Lindane	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Lindane	92.500	100.000	UGL	7.8	(0-20)
LCS1	Methoxychlor	2	2.14	UGL	107.0	(70-130)

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LCS2	Methoxychlor	2	2.24	UGL	112.0	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Methoxychlor	107.000	112.000	UGL	4.6	(0-20)
LCS1	Metribuzin	2	2.02	UGL	101.0	(70-130)
LCS2	Metribuzin	2	1.97	UGL	98.5	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLMD	Metribuzin	0.05	0.050	UGL	100.0	(50-150)
MS	Metribuzin	2	1.92	UGL	96.0	(70-130)
RPD_LCS	Metribuzin	101.000	98.500	UGL	2.5	(0-20)
LCS1	Malathion	2	2.16	UGL	108.0	(70-130)
LCS2	Malathion	2	2.30	UGL	115.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Malathion	108.000	115.000	UGL	6.3	(0-20)
LCS1	Molinate	2	2.17	UGL	108.5	(70-130)
LCS2	Molinate	2	2.20	UGL	110.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Molinate	108.500	110.000	UGL	1.4	(0-20)
LCS1	Metolachlor	2	2.18	UGL	109.0	(70-130)
LCS2	Metolachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLMD	Metolachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Metolachlor	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Metolachlor	109.000	112.000	UGL	2.7	(0-20)
LCS1	Naphthalene	2	2.07	UGL	103.5	(70-130)
LCS2	Naphthalene	2	2.03	UGL	101.5	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MS	Naphthalene	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Naphthalene	103.500	101.500	UGL	2.0	(0-20)
LCS1	trans-Nonachlor	2	2.09	UGL	104.5	(70-130)
LCS2	trans-Nonachlor	2	2.11	UGL	105.5	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MRLMD	trans-Nonachlor	0.05	0.070	UGL	140.0	(50-150)
MS	trans-Nonachlor	2	2.17	UGL	108.5	(70-130)

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RPD_LCS	trans-Nonachlor	104.500	105.500	UGL	1.0	(0-20)
LCS1	Pentachlorophenol	8	9.53	UGL	119.1	(70-130)
LCS2	Pentachlorophenol	8	9.35	UGL	116.9	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	9.93	UGL	124.1	(70-130)
RPD_LCS	Pentachlorophenol	119.125	116.875	UGL	1.9	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.27	UGL	106.7	(70-130)
LCS2	Permethrin (mixed isomers)	4	4.28	UGL	107.0	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	4.31	UGL	107.7	(70-130)
RPD_LCS	Permethrin (mixed isomers)	106.750	107.000	UGL	0.2	(0-20)
LCS1	Phenanthrene	2	2.04	UGL	102.0	(70-130)
LCS2	Phenanthrene	2	2.07	UGL	103.5	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLMD	Phenanthrene	0.05	0.060	UGL	120.0	(50-150)
MS	Phenanthrene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Phenanthrene	102.000	103.500	UGL	1.5	(0-20)
LCS1	Propachlor	2	1.94	UGL	97.0	(70-130)
LCS2	Propachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLMD	Propachlor	0.05	0.070	UGL	140.0	(50-150)
MS	Propachlor	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Propachlor	97.000	101.000	UGL	4.0	(0-20)
LCS1	Parathion	2	2.23	UGL	111.5	(70-130)
LCS2	Parathion	2	2.30	UGL	115.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Parathion	111.500	115.000	UGL	3.1	(0-20)
LCS1	Pyrene	2	2.08	UGL	104.0	(70-130)
LCS2	Pyrene	2	2.13	UGL	106.5	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MRLMD	Pyrene	0.05	0.050	UGL	100.0	(50-150)
MS	Pyrene	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Pyrene	104.000	106.500	UGL	2.4	(0-20)
LCS1	Simazine	2	1.98	UGL	99.0	(70-130)
LCS2	Simazine	2	2.09	UGL	104.5	(70-130)

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MBLK	Simazine	ND	<0.05	UGL		
MRLMD	Simazine	0.05	0.060	UGL	120.0	(50-150)
MS	Simazine	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Simazine	99.000	104.500	UGL	5.4	(0-20)
LCS1	Perylene-d12	100	95	%R	95.0	(70-130)
LCS2	Perylene-d12	100	96	%R	96.0	(70-130)
MBLK	Perylene-d12	100	81	%R	81.0	
MRLMD	Perylene-d12	100	79	%R	79.0	(70-130)
MS	Perylene-d12	100	97	%R	97.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	102	%R	102.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	
MRLMD	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	101	%R	101.0	(70-130)
LCS1	Triphenylphosphate	100	102	%R	102.0	(70-130)
LCS2	Triphenylphosphate	100	105	%R	105.0	(70-130)
MBLK	Triphenylphosphate	100	108	%R	108.0	
MRLMD	Triphenylphosphate	100	105	%R	105.0	(70-130)
MS	Triphenylphosphate	100	109	%R	109.0	(70-130)
LCS1	Thiobencarb (ELAP Cert)	2	2.17	UGL	108.5	(70-130)
LCS2	Thiobencarb (ELAP Cert)	2	2.22	UGL	111.0	(70-130)
MBLK	Thiobencarb (ELAP Cert)	ND	<0.2	UGL		
MS	Thiobencarb (ELAP Cert)	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Thiobencarb (ELAP Cert)	108.500	111.000	UGL	2.3	(0-20)
LCS1	Terbacil	2	1.88	UGL	94.0	(70-130)
LCS2	Terbacil	2	2.14	UGL	107.0	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	94.000	107.000	UGL	12.9	(0-20)
LCS1	Trifluralin	2	2.18	UGL	109.0	(70-130)
LCS2	Trifluralin	2	2.25	UGL	112.5	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Trifluralin	109.000	112.500	UGL	3.2	(0-20)

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QC Ref #438708 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.68	UGL	84.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.66	UGL	83.0	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	84.000	93.500	UGL	10.7	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.73	UGL	86.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.88	UGL	94.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.63	UGL	81.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	86.500	94.000	UGL	8.3	(0-20)	
LCS1	Alpha-BHC	2	2.17	UGL	108.5	(70-130)	
LCS2	Alpha-BHC	2	2.18	UGL	109.0	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			
MS	Alpha-BHC	2	2.09	UGL	104.5	(70-130)	
LCS1	alpha-Chlordane	2	2.24	UGL	112.0	(70-130)	
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)	
MBLK	alpha-Chlordane	ND	<0.05	UGL			
MRLMD	alpha-Chlordane	0.05	0.060	UGL	120.0	(50-150)	
MS	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)	
RPD_LCS	alpha-Chlordane	112.000	104.000	UGL	7.4	(0-20)	
LCS1	Diazinon (Qualitative)	2	1.93	UGL	96.5	(70-130)	
LCS2	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)	
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL			
MS	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)	
RPD_LCS	Diazinon (Qualitative)	96.500	101.500	UGL	5.1	(0-20)	
MS	Spiked sample	Lab # 28	06270194	NONE		(0-0)	
LCS1	Acenaphthene	2	2.09	UGL	104.5	(70-130)	
LCS2	Acenaphthene	2	2.12	UGL	106.0	(70-130)	
MBLK	Acenaphthene	ND	<0.1	UGL			
MS	Acenaphthene	2	2.08	UGL	104.0	(70-130)	
RPD_LCS	Acenaphthene	104.500	106.000	UGL	1.4	(0-20)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Acenaphthylene	2	2.06	UGL	103.0	(70-130)
LCS2	Acenaphthylene	2	2.11	UGL	105.5	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Acenaphthylene	103.000	105.500	UGL	2.4	(0-20)
LCS1	Acetochlor	2	1.98	UGL	99.0	(70-130)
LCS2	Acetochlor	2	2.10	UGL	105.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Acetochlor	99.000	105.000	UGL	5.9	(0-20)
LCS1	Alachlor	2	2.04	UGL	102.0	(70-130)
LCS2	Alachlor	2	2.10	UGL	105.0	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLMD	Alachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Alachlor	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Alachlor	102.000	105.000	UGL	2.9	(0-20)
LCS1	Aldrin	2	1.86	UGL	93.0	(70-130)
LCS2	Aldrin	2	1.84	UGL	92.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MRLMD	Aldrin	0.05	0.060	UGL	120.0	(50-150)
MS	Aldrin	2	1.76	UGL	88.0	(70-130)
RPD_LCS	Aldrin	93.000	92.000	UGL	1.1	(0-20)
LCS1	Anthracene	2	1.99	UGL	99.5	(70-130)
LCS2	Anthracene	2	1.75	UGL	87.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLMD	Anthracene	0.05	0.030	UGL	60.0	(50-150)
MS	Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Anthracene	99.500	87.500	UGL	12.8	(0-20)
LCS1	Atrazine	2	2.01	UGL	100.5	(70-130)
LCS2	Atrazine	2	2.22	UGL	111.0	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MRLMD	Atrazine	0.05	0.070	UGL	140.0	(50-150)
MS	Atrazine	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Atrazine	100.500	111.000	UGL	9.9	(0-20)
LCS1	Benz(a)Anthracene	2	1.86	UGL	93.0	(70-130)
LCS2	Benz(a)Anthracene	2	2.01	UGL	100.5	(70-130)

MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLMD	Benz(a)Anthracene	0.05	0.060	UGL	120.0	(50-150)
MS	Benz(a)Anthracene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Benz(a)Anthracene	93.000	100.500	UGL	7.8	(0-20)
LCS1	Benzo(a)pyrene	2	2.03	UGL	101.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.00	UGL	100.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLMD	Benzo(a)pyrene	0.05	0.030	UGL	60.0	(50-150)
MS	Benzo(a)pyrene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Benzo(a)pyrene	101.500	100.000	UGL	1.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLMD	Benzo(b)Fluoranthene	0.05	0.060	UGL	120.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	104.500	107.000	UGL	2.4	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	2.17	UGL	108.5	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	2.16	UGL	108.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLMD	Benzo(g,h,i)Perylene	0.05	0.050	UGL	100.0	(50-150)
MS	Benzo(g,h,i)Perylene	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	108.500	108.000	UGL	0.5	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.08	UGL	104.0	(70-130)
LCS2	Benzo(k)Fluoranthene	2	2.09	UGL	104.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLMD	Benzo(k)Fluoranthene	0.05	0.050	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	104.000	104.500	UGL	0.5	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	2.08	UGL	104.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.98	UGL	99.0	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	5.57	UGL	278.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	104.000	99.000	UGL	4.9	(0-20)
LCS1	Beta-BHC	2	2.10	UGL	105.0	(70-130)
LCS2	Beta-BHC	2	2.37	UGL	118.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		

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Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Beta-BHC	2	2.24	UGL	112.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.16	UGL	108.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.29	UGL	114.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	4.73	UGL	236.5	(70-130)
RPD_LCS	Butylbenzylphthalate	108.000	114.500	UGL	5.8	(0-20)
LCS1	Bromacil	2	2.05	UGL	102.5	(70-130)
LCS2	Bromacil	2	2.23	UGL	111.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Bromacil	102.500	111.500	UGL	8.4	(0-20)
LCS1	Butachlor	2	2.21	UGL	110.5	(70-130)
LCS2	Butachlor	2	2.25	UGL	112.5	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLMD	Butachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Butachlor	2	2.39	UGL	119.5	(70-130)
RPD_LCS	Butachlor	110.500	112.500	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.44	UGL	72.0	(45-137)
LCS2	Caffeine by method 525mod	2	1.49	UGL	74.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MRLMD	Caffeine by method 525mod	0.05	0.050	UGL	100.0	(50-150)
MS	Caffeine by method 525mod	2	1.35	UGL	67.5	(46-144)
RPD_LCS	Caffeine by method 525mod	72.000	74.500	UGL	3.4	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.17	UGL	108.5	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MS	Chlorothalonil(Draconil,Bravo)	2	2.10	UGL	105.0	(70-130)
LCS1	Chrysene	2	2.07	UGL	103.5	(70-130)
LCS2	Chrysene	2	2.09	UGL	104.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLMD	Chrysene	0.05	0.060	UGL	120.0	(50-150)
MS	Chrysene	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Chrysene	103.500	104.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.14	UGL	107.0	(70-130)
LCS2	Chlorobenzilate	2	2.26	UGL	113.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		

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Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Chlorobenzilate	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Chlorobenzilate	107.000	113.000	UGL	5.5	(0-20)
LCS1	Chloroneb	2	2.04	UGL	102.0	(70-130)
LCS2	Chloroneb	2	2.14	UGL	107.0	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Chloroneb	102.000	107.000	UGL	4.8	(0-20)
LCS1	Delta-BHC	2	2.05	UGL	102.5	(70-130)
LCS2	Delta-BHC	2	2.13	UGL	106.5	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.10	UGL	105.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.12	UGL	106.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.18	UGL	109.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLMD	Dibenz(a,h)Anthracene	0.05	0.050	UGL	100.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	106.000	109.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
LCS2	4,4'-DDD	2	2.15	UGL	107.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.17	UGL	108.5	(70-130)
RPD_LCS	4,4'-DDD	103.500	107.500	UGL	3.8	(0-20)
LCS1	4,4'-DDE	2	2.07	UGL	103.5	(70-130)
LCS2	4,4'-DDE	2	2.05	UGL	102.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	2.06	UGL	103.0	(70-130)
RPD_LCS	4,4'-DDE	103.500	102.500	UGL	1.0	(0-20)
LCS1	4,4'-DDT	2	2.01	UGL	100.5	(70-130)
LCS2	4,4'-DDT	2	2.12	UGL	106.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	2.20	UGL	110.0	(70-130)
RPD_LCS	4,4'-DDT	100.500	106.000	UGL	5.3	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.11	UGL	105.5	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.17	UGL	108.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLMD	Dichlorvos (DDVP)	0.05	0.050	UGL	100.0	(50-150)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Dichlorvos (DDVP)	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	105.500	108.500	UGL	2.8	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.09	UGL	104.5	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	2.17	UGL	108.5	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	2.34	UGL	117.0	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	104.500	108.500	UGL	3.8	(0-20)
LCS1	Diethylphthalate	2	2.15	UGL	107.5	(70-130)
LCS2	Diethylphthalate	2	2.25	UGL	112.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Diethylphthalate	107.500	112.500	UGL	4.5	(0-20)
LCS1	Dieldrin	2	2.19	UGL	109.5	(70-130)
LCS2	Dieldrin	2	2.14	UGL	107.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.28	UGL	114.0	(70-130)
RPD_LCS	Dieldrin	109.500	107.000	UGL	2.3	(0-20)
LCS1	Dimethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Dimethylphthalate	2	2.20	UGL	110.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Dimethylphthalate	107.000	110.000	UGL	2.8	(0-20)
LCS1	Dimethoate	2	1.20	UGL	60.0	(35-100)
LCS2	Dimethoate	2	1.21	UGL	60.5	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	0.99	UGL	49.5	(34-111)
RPD_LCS	Dimethoate	60.000	60.500	UGL	0.8	(0-20)
LCS1	Di-n-Butylphthalate	4	4.54	UGL	113.5	(70-130)
LCS2	Di-n-Butylphthalate	4	4.58	UGL	114.5	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	4.66	UGL	116.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	113.500	114.500	UGL	0.9	(0-20)
LCS1	Di-N-octylphthalate	2	2.03	UGL	101.5	(70-130)
LCS2	Di-N-octylphthalate	2	2.06	UGL	103.0	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	2.11	UGL	105.5	(70-130)

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Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD_LCS	Di-N-octylphthalate	101.500	103.000	UGL	1.5	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.02	UGL	101.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLMD	Chlorpyrifos (Dursban)	0.05	0.050	UGL	100.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	101.000	103.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	2.17	UGL	108.5	(70-130)
LCS2	Endrin Aldehyde	2	2.18	UGL	109.0	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	2.28	UGL	114.0	(70-130)
LCS1	Endrin	2	1.83	UGL	91.5	(70-130)
LCS2	Endrin	2	2.01	UGL	100.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Endrin	91.500	100.500	UGL	9.4	(0-20)
LCS1	EPTC	2	2.16	UGL	108.0	(70-130)
LCS2	EPTC	2	2.12	UGL	106.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.07	UGL	103.5	(70-130)
RPD_LCS	EPTC	108.000	106.000	UGL	1.9	(0-20)
LCS1	Endosulfan I (Alpha)	2	2.08	UGL	104.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	2.25	UGL	112.5	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	2.09	UGL	104.5	(70-130)
LCS1	Endosulfan II (Beta)	2	1.94	UGL	97.0	(70-130)
LCS2	Endosulfan II (Beta)	2	2.14	UGL	107.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	2.20	UGL	110.0	(70-130)
LCS1	Endosulfan Sulfate	2	2.17	UGL	108.5	(70-130)
LCS2	Endosulfan Sulfate	2	2.29	UGL	114.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	2.19	UGL	109.5	(70-130)
LCS1	Fluoranthene	2	2.11	UGL	105.5	(70-130)
LCS2	Fluoranthene	2	2.20	UGL	110.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		

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MS	Fluoranthene	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Fluoranthene	105.500	110.000	UGL	4.2	(0-20)
LCS1	Fluorene	2	2.10	UGL	105.0	(70-130)
LCS2	Fluorene	2	2.16	UGL	108.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MRLMD	Fluorene	0.05	0.060	UGL	120.0	(50-150)
MS	Fluorene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluorene	105.000	108.000	UGL	2.8	(0-20)
LCS1	gamma-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	gamma-Chlordane	2	2.11	UGL	105.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLMD	gamma-Chlordane	0.05	0.060	UGL	120.0	(50-150)
MS	gamma-Chlordane	2	2.12	UGL	106.0	(70-130)
RPD_LCS	gamma-Chlordane	103.000	105.500	UGL	2.4	(0-20)
LCS1	Hexachlorobenzene	2	2.13	UGL	106.5	(70-130)
LCS2	Hexachlorobenzene	2	2.10	UGL	105.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MRLMD	Hexachlorobenzene	0.15	0.18	UGL	120.0	(50-150)
MS	Hexachlorobenzene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Hexachlorobenzene	106.500	105.000	UGL	1.4	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.03	UGL	101.5	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.01	UGL	100.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLMD	Hexachlorocyclopentadiene	0.15	0.16	UGL	106.7	(50-150)
MS	Hexachlorocyclopentadiene	2	1.94	UGL	97.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	101.500	100.500	UGL	1.0	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	1.98	UGL	99.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLMD	Heptachlor	0.05	0.050	UGL	100.0	(50-150)
MS	Heptachlor	2	1.92	UGL	96.0	(70-130)
RPD_LCS	Heptachlor	99.500	99.000	UGL	0.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.08	UGL	104.0	(70-130)
LCS2	Heptachlor Epoxide (isomer B)	2	2.10	UGL	105.0	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLMD	Heptachlor Epoxide (isomer B)	0.05	0.040	UGL	80.0	(50-150)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Heptachlor Epoxide (isomer B)	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	104.000	105.000	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.15	UGL	107.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MRLMD	Indeno(1,2,3,c,d)Pyrene	0.05	0.050	UGL	100.0	(50-150)
MS	Indeno(1,2,3,c,d)Pyrene	2	2.19	UGL	109.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	107.500	106.000	UGL	1.4	(0-20)
LCS1	Isophorone	2	2.06	UGL	103.0	(70-130)
LCS2	Isophorone	2	2.04	UGL	102.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Isophorone	103.000	102.000	UGL	1.0	(0-20)
LCS1	Lindane	2	1.85	UGL	92.5	(70-130)
LCS2	Lindane	2	2.00	UGL	100.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLMD	Lindane	0.05	0.070	UGL	140.0	(50-150)
MS	Lindane	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Lindane	92.500	100.000	UGL	7.8	(0-20)
LCS1	Methoxychlor	2	2.14	UGL	107.0	(70-130)
LCS2	Methoxychlor	2	2.24	UGL	112.0	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Methoxychlor	107.000	112.000	UGL	4.6	(0-20)
LCS1	Metribuzin	2	2.02	UGL	101.0	(70-130)
LCS2	Metribuzin	2	1.97	UGL	98.5	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLMD	Metribuzin	0.05	0.050	UGL	100.0	(50-150)
MS	Metribuzin	2	1.92	UGL	96.0	(70-130)
RPD_LCS	Metribuzin	101.000	98.500	UGL	2.5	(0-20)
LCS1	Malathion	2	2.16	UGL	108.0	(70-130)
LCS2	Malathion	2	2.30	UGL	115.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Malathion	108.000	115.000	UGL	6.3	(0-20)
LCS1	Molinate	2	2.17	UGL	108.5	(70-130)

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LCS2	Molinate	2	2.20	UGL	110.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Molinate	108.500	110.000	UGL	1.4	(0-20)
LCS1	Metolachlor	2	2.18	UGL	109.0	(70-130)
LCS2	Metolachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLMD	Metolachlor	0.05	0.060	UGL	120.0	(50-150)
MS	Metolachlor	2	2.22	UGL	111.0	(70-130)
RPD_LCS	Metolachlor	109.000	112.000	UGL	2.7	(0-20)
LCS1	Naphthalene	2	2.07	UGL	103.5	(70-130)
LCS2	Naphthalene	2	2.03	UGL	101.5	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MS	Naphthalene	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Naphthalene	103.500	101.500	UGL	2.0	(0-20)
LCS1	trans-Nonachlor	2	2.09	UGL	104.5	(70-130)
LCS2	trans-Nonachlor	2	2.11	UGL	105.5	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MRLMD	trans-Nonachlor	0.05	0.070	UGL	140.0	(50-150)
MS	trans-Nonachlor	2	2.17	UGL	108.5	(70-130)
RPD_LCS	trans-Nonachlor	104.500	105.500	UGL	1.0	(0-20)
LCS1	Pentachlorophenol	8	9.53	UGL	119.1	(70-130)
LCS2	Pentachlorophenol	8	9.35	UGL	116.9	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	9.93	UGL	124.1	(70-130)
RPD_LCS	Pentachlorophenol	119.125	116.875	UGL	1.9	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.27	UGL	106.7	(70-130)
LCS2	Permethrin (mixed isomers)	4	4.28	UGL	107.0	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	4.31	UGL	107.7	(70-130)
RPD_LCS	Permethrin (mixed isomers)	106.750	107.000	UGL	0.2	(0-20)
LCS1	Phenanthrene	2	2.04	UGL	102.0	(70-130)
LCS2	Phenanthrene	2	2.07	UGL	103.5	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLMD	Phenanthrene	0.05	0.060	UGL	120.0	(50-150)
MS	Phenanthrene	2	2.04	UGL	102.0	(70-130)

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RPD_LCS	Phenanthrene	102.000	103.500	UGL	1.5	(0-20)
LCS1	Propachlor	2	1.94	UGL	97.0	(70-130)
LCS2	Propachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLMD	Propachlor	0.05	0.070	UGL	140.0	(50-150)
MS	Propachlor	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Propachlor	97.000	101.000	UGL	4.0	(0-20)
LCS1	Parathion	2	2.23	UGL	111.5	(70-130)
LCS2	Parathion	2	2.30	UGL	115.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Parathion	111.500	115.000	UGL	3.1	(0-20)
LCS1	Pyrene	2	2.08	UGL	104.0	(70-130)
LCS2	Pyrene	2	2.13	UGL	106.5	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MRLMD	Pyrene	0.05	0.050	UGL	100.0	(50-150)
MS	Pyrene	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Pyrene	104.000	106.500	UGL	2.4	(0-20)
LCS1	Simazine	2	1.98	UGL	99.0	(70-130)
LCS2	Simazine	2	2.09	UGL	104.5	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MRLMD	Simazine	0.05	0.060	UGL	120.0	(50-150)
MS	Simazine	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Simazine	99.000	104.500	UGL	5.4	(0-20)
LCS1	Perylene-d12	100	95	%R	95.0	(70-130)
LCS2	Perylene-d12	100	96	%R	96.0	(70-130)
MBLK	Perylene-d12	100	81	%R	81.0	
MRLMD	Perylene-d12	100	79	%R	79.0	(70-130)
MS	Perylene-d12	100	97	%R	97.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	102	%R	102.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	
MRLMD	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	101	%R	101.0	(70-130)
LCS1	Triphenylphosphate	100	102	%R	102.0	(70-130)
LCS2	Triphenylphosphate	100	105	%R	105.0	(70-130)

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MBLK	Triphenylphosphate	100	108	%R	108.0	
MRLMD	Triphenylphosphate	100	105	%R	105.0	(70-130)
MS	Triphenylphosphate	100	109	%R	109.0	(70-130)
LCS1	Thiobencarb (ELAP Cert)	2	2.17	UGL	108.5	(70-130)
LCS2	Thiobencarb (ELAP Cert)	2	2.22	UGL	111.0	(70-130)
MBLK	Thiobencarb (ELAP Cert)	ND	<0.2	UGL		
MS	Thiobencarb (ELAP Cert)	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Thiobencarb (ELAP Cert)	108.500	111.000	UGL	2.3	(0-20)
LCS1	Terbacil	2	1.88	UGL	94.0	(70-130)
LCS2	Terbacil	2	2.14	UGL	107.0	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	94.000	107.000	UGL	12.9	(0-20)
LCS1	Trifluralin	2	2.18	UGL	109.0	(70-130)
LCS2	Trifluralin	2	2.25	UGL	112.5	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Trifluralin	109.000	112.500	UGL	3.2	(0-20)

QC Ref #441250 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	20	24.4	NGL	122.0	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	50	53.7	NGL	107.4	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	114	NGL	114.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
LCS1	Perfluoro octanoic acid - PFOA	20	19	NGL	95.0	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	50	58.8	NGL	117.6	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	89	NGL	89.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
LCS1	Perfluoro octanesulfonate-PFOS	20	25.6	NGL	128.0	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	50	52.0	NGL	104.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	97.9	NGL	97.9	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
LCS1	Internal Standard	100	112	%R	112.0	(80-120)	

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LCS2	Internal Standard	100	108	%R	108.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	98	%R		

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MWH Laboratories
A Division of MWH Americas, Inc.

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1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Jul 30 2008
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA

Report#: 244246
Project: RECLAIMED
PO#: 081707.00

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 6 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 081707.00
Group#: 244246
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **06/14/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2806140028	2514C/SJ/SC-C	@NDMA	Water	10-jun-2008 11:00:00
2806140029	2514D/SJ/SC-D	@NDMA	Water	10-jun-2008 11:00:00
2806140030	2514G/SCRWA-C	@NDMA	Water	11-jun-2008 13:00:00
2806140031	2514H/SCRWA-D	@NDMA	Water	09-jun-2008 11:00:00
2806140032	2514K/DI-C	@NDMA	Water	12-jun-2008 09:00:00

Test Acronym Description

Test Acronym	Description
@NDMA	N-Nitroso dimethylamine (NDMA)

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CHAIN OF CUSTODY RECORD

244296

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: JS

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ **PARTIALLY FROZEN** ___ **THAWED** ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: LOCUS TECH / VECTOR ENG.

SYSTEM #:

COMPLIANCE SAMPLES ☐ *(check for yes)*
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ *(check for yes)*
REGULATION INVOLVED:
(eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: 081707.00

P.O.# / PROJECT JOB #:

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☑ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE:

TAT requested: rush by adv notice only
STD___ 1 wk ___ 3 day ___ 2 day___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP																SAMPLER COMMENTS
6/10	1100		2514C/SJ/SC-C																			
6/10	1100		2514 D/SJ/SC-D																			
6/11	1300		2514 G/SCRWA-C																			
6/9	1100		2514 H/SCRWA-D																			
6/12	0900		2518 K/ DI-C																			

*** MATRIX TYPES:**

RSW = Raw Surface Water	CFW = Chlor(am)inated Finished Water	CWW = Chlorinated Waste Water	BW = Bottled Water	SO = Soil
RGW = Raw Ground Water	FW = Other Finished Water	WW = Other Waste Water	SW = Storm Water	SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:					
RECEIVED BY:	Joe Sanchez	JOE SANCHEZ	MWH	6-14-08	12:35
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ______ OF ______

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Laboratory
Hits Report
#244246

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
14-jun-2008 12:36:43

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2806140028	**2514C/SJ/SC-C**				
	2806140029	**2514D/SJ/SC-D**				
06/21/08	N-Nitroso dimethylamine (NDMA)		211		ng/l	2.0
	2806140030	**2514G/SCRWA-C**				
06/21/08	N-Nitroso dimethylamine (NDMA)		7.3		ng/l	2.0
	2806140031	**2514H/SCRWA-D**				
	2806140032	**2514K/DI-C**				
06/21/08	N-Nitroso dimethylamine (NDMA)		8.6		ng/l	2.0

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory
Data Report
#244246

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
06/14/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
2514C/SJ/SC-C (2806140028)				**Sampled on 06/10/08 11:00**				
				N-Nitroso dimethylamine (NDMA)				
06/16/08	06/21/08 00:00	433693	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND(H1)	ng/l	10	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	NA(H1)	% Rec		
2514D/SJ/SC-D (2806140029)				**Sampled on 06/10/08 11:00**				
				N-Nitroso dimethylamine (NDMA)				
06/16/08	06/21/08 00:00	433693	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	211	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	80	% Rec		
2514G/SCRWA-C (2806140030)				**Sampled on 06/11/08 13:00**				
				N-Nitroso dimethylamine (NDMA)				
06/17/08	06/21/08 00:00	434250	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	7.3	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	98	% Rec		
2514H/SCRWA-D (2806140031)				**Sampled on 06/09/08 11:00**				
				N-Nitroso dimethylamine (NDMA)				
06/16/08	06/21/08 00:00	433693	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	10	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	86	% Rec		
2514K/DI-C (2806140032)				**Sampled on 06/12/08 09:00**				
				N-Nitroso dimethylamine (NDMA)				
06/17/08	06/21/08 00:00	434250	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	8.6	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	86	% Rec		

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Report
Comments
#244246

(QC Ref#: 2806140028)

Test: N-Nitroso dimethylamine (NDMA) (MW/EPA 1625MOD)

(NDMA) See QIR GCMS_247691 No IS detected in sample extract. No indication of NDMA in sample However, due to peak shape, detection limit raised to 10 ng/L.

HD - Sample analysis performed past holding time. Data not acceptable for regulatory compliance.

(QC Ref#: 2806140031)

Test: N-Nitroso dimethylamine (NDMA) (MW/EPA 1625MOD)

(NDMA) See QIR GCMS_247691 No IS detected in sample extract. No NDMA detected in sample however due to chromatography, detection level raised to 10 ng/L NSMA.

MWH Laboratories
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750 Royal Oaks Drive, Suite 100
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Laboratory
QC Summary
#244246

Locus Technologies

QC Ref #433693 - N-Nitroso dimethylamine (NDMA) Analysis Date: 06/21/2008

2806140028	2514C/SJ/SC-C	Analyzed by: dlo
2806140029	2514D/SJ/SC-D	Analyzed by: dlo
2806140031	2514H/SCRWA-D	Analyzed by: dlo

QC Ref #434250 - N-Nitroso dimethylamine (NDMA) Analysis Date: 06/21/2008

2806140030	2514G/SCRWA-C	Analyzed by: dlo
2806140032	2514K/DI-C	Analyzed by: dlo

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Laboratory
QC Report
#244246

Locus Technologies

QC Ref #433693 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	06160003	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	1.83	NGL	91.5	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	1.96	NGL	98.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	10.8	NGL	108.0	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	10.6	NGL	106.0	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	91.500	98.000	NGL	6.9	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	108.000	106.000	NGL	1.9	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	56	%R	56.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	56	%R	56.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	88	%R	88.0		
MS	NDMA-d6(Internal Standard)	100	94	%R	94.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	94	%R	94.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	56.000	56.000	%R	0.0	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	94.000	94.000	%R	0.0	(0-20)	

QC Ref #434250 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	06170096	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.45	NGL	122.5	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.30	NGL	115.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	9.31	NGL	93.1	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	10.6	NGL	106.0	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	122.500	115.000	NGL	6.3	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	93.100	106.000	NGL	13.0	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	102	%R	102.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	104	%R	104.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	95	%R	95.0		
MS	NDMA-d6(Internal Standard)	100	98	%R	98.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	88	%R	88.0	(50-150)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD_LCS	NDMA-d6(Internal Standard)	102.000	104.000	%R	1.9	(0-20)
RPD_MS	NDMA-d6(Internal Standard)	98.000	88.000	%R	10.8	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

WL

Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

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CERTIFICATE OF ANALYSIS

Client:	Locus Technologies	**Report Date:**	06/16/08 13:58
	299 Fairchild Drive	**Received Date:**	05/21/08 09:00
	Mountain View, CA 94043	**Turn Around:**	Normal
	Attention: Norman Wong	**Work Order #:**	8052109
	Phone: (650) 641-8258		
	Fax: (650) 960-0739	**Client Project:**	27011-07-4100

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Norman Wong :

Enclosed are the results of analyses for samples received 05/21/08 09:00 with the Chain of Custody document. The samples were received in good condition. The samples were received at 3.8 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Hai Van Nguyen
Project Manager

Locus Technologies
299 Fairchild Drive
Mountain View CA. 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-1	Castro/Murphy		8052109-01	Water	05/19/08 08:45
MW-2	Castro/Murphy		8052109-02	Water	05/19/08 09:50
MW-3	Castro/Murphy		8052109-03	Water	05/19/08 10:50
MW-4	Castro/Murphy		8052109-04	Water	05/19/08 12:00
SJ/SC Plant	Castro/Murphy		8052109-05	Water	05/19/08 07:00
4761	Castro/Murphy		8052109-06	Water	05/19/08 07:35
4762	Castro/Murphy		8052109-07	Water	05/19/08 00:00

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-1 8052109-01 (Water) **Date** **05/19/08 08:45**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	**61**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Nitrate as N	**5700**	ug/l	110	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Sulfate as SO4	**89**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**420**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	**520**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	**0.57**	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	**580**	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	**0.50**	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate. 2,3-Dibromopropionic acid	102	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

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Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-1 8052109-01 (Water) Date **05/19/08 08:45**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	180	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	100	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	2.3	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	66	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	43	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	4.3	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-1 8052109-01 (Water) **Date** **05/19/08 08:45**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
2-Chloroethyl vinyl ether	ND	ug/l	1 0	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Benzene	ND	ug/l	0 50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0 50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0 50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0 50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Chloroform	ND	ug/l	0 50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0 50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0 50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3 0	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3 0	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0 50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1 0	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0 50	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3 0	1	EPA 524 2	W8E0830	05/21/08	05/22/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-1 8052109-01 (Water) **Date** **05/19/08 08:45**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Surrogate. 1,2-Dichlorobenzene-d4	99	*%*	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	
Surrogate. 4-Bromofluorobenzene	97	*%*	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	

MW-2 8052109-02 (Water) **Date** **05/19/08 09:50**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	**26**	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04
Nitrate as N	**3600**	ug/l	110	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-2 8052109-02 (Water) Date **05/19/08 09:50**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Sulfate as SO4	40	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	320	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	390	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	0.44	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	380	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	0.44	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	111	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	140	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	62	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	1.4	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

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MW-2 8052109-02 (Water) Date **05/19/08 09:50**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Magnesium	36	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	32	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

MW-2 8052109-02 (Water) Date **05/19/08 09:50**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

MW-2 8052109-02 (Water) Date **05/19/08 09:50**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	97	%	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	97	%	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	

MW-3 8052109-03 (Water) Date **05/19/08 10:50**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	**45**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04
Nitrate as N	**6300**	ug/l	110	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04
Sulfate as SO4	**65**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

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MW-3 8052109-03 (Water) **Date** **05/19/08 10:50**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	490	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	600	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	0.49	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	610	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	0.48	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	99	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	200	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	100	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	0.85	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	61	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	42	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

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MW-3 8052109-03 (Water) Date 05/19/08 10:50

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-3 8052109-03 (Water) Date 05/19/08 10:50

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

MW-3 8052109-03 (Water) Date **05/19/08 10:50**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	96	%	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	96	%	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	

MW-4 8052109-04 (Water) Date **05/19/08 12:00**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	**50**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04
Nitrate as N	**4000**	ug/l	110	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04
Sulfate as SO4	**69**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**510**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	**620**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	

Locus Technologies
299 Fairchild Drive
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Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-4 8052109-04 (Water) Date **05/19/08 12:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	**0.90**	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	**630**	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	**0.86**	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	93	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	**200**	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	**110**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	**0.81**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	**61**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	**41**	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

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Date Received: 05/21/08 09:00
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MW-4 8052109-04 (Water) Date **05/19/08 12:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies
299 Fairchild Drive
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MW-4 8052109-04 (Water) Date **05/19/08 12:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

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MW-4 8052109-04 (Water) Date **05/19/08 12:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	103	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	101	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	

SJ/SC Plant 8052109-05 (Water) Date **05/19/08 07:00**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	**190**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Nitrate as N	**9600**	ug/l	560	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Sulfate as SO4	**94**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**190**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	**230**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	**6.8**	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	**690**	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	**6.9**	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

SJ/SC Plant 8052109-05 (Water) Date **05/19/08 07:00**

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	9.6	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	3.4	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	14	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	27	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	9.7	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	85	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	480	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	54	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	16	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	30	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	130	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA. 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

SJ/SC Plant **8052109-05 (Water)** Date **05/19/08 07:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromodichloromethane	**15**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromoform	**1.3**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroform	**12**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

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SJ/SC Plant **8052109-05 (Water)** **Date** **05/19/08 07:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dibromochloromethane	7.1	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

SJ/SC Plant 8052109-05 (Water) Date **05/19/08 07:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	102	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	102	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	

4761 8052109-06 (Water) Date **05/19/08 07:35**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	**190**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Nitrate as N	**9300**	ug/l	560	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Sulfate as SO4	**96**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**190**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	**230**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	**7.0**	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	**680**	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	**6.9**	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	**10**	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	**3.3**	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

4761 8052109-06 (Water) Date 05/19/08 07:35

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dichloroacetic acid (dcaa)	15	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	29	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	11	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	89	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	480	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	53	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	15	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	29	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	130	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

4761 8052109-06 (Water) Date **05/19/08 07:35**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromodichloromethane	**16**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromoform	**1.3**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroform	**13**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromochloromethane	**7.8**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA. 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

4761 8052109-06 (Water) Date **05/19/08 07:35**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

4761 8052109-06 (Water) Date 05/19/08 07:35

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	102	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	102	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	

4762 8052109-07 (Water) Date 05/19/08 00:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/23/08	mac	
Chloride	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/23/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/23/08	mac	O-09
Nitrate as N	ND	ug/l	110	1	EPA 300.0	W8E1018	05/22/08	05/23/08	mac	O-09
Sulfate as SO4	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/23/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0092	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	ND	mg/l	2.0	1	SM 2320B	W8F0092	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0092	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0092	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	ND	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	ND	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	ND	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

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4762 8052109-07 (Water) Date **05/19/08 00:00**

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	101	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	ND	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	ND	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	ND	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	ND	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	ND	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

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4762 8052109-07 (Water) Date **05/19/08 00:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

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4762 8052109-07 (Water) Date **05/19/08 00:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methylene chloride	**1.3**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	99	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	99	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	

QUALITY CONTROL SECTION

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1018 - EPA 300.0/300.1										
Blank (W8E1018-BLK1)				Analyzed: 05/22/08						
Bromide	ND	0.50	mg/l							
Chloride	ND	0.50	mg/l							
Nitrate as N	ND	110	ug/l							
Nitrite as N	ND	150	ug/l							
Sulfate as SO4	ND	0.50	mg/l							
LCS (W8E1018-BS1)				Analyzed: 05/22/08						
Bromide	424	25	mg/l	400		106	90-110			
Chloride	198	25	mg/l	200		99	90-110			
Nitrate as N	88800	5600	ug/l	90300		98	90-110			
Nitrite as N	29200	7600	ug/l	30400		96	90-110			
Sulfate as SO4	389	25	mg/l	400		97	90-110			
Matrix Spike (W8E1018-MS1)	**Source: 8052109-02**			Analyzed: 05/23/08						
Bromide	43.2	2.5	mg/l	40.0	0.171	108	83-113			
Chloride	45.1	2.5	mg/l	20.0	26.4	94	72-118			
Nitrate as N	12500	560	ug/l	9030	3580	98	80-107			
Nitrite as N	2950	760	ug/l	3040	ND	97	86-111			
Sulfate as SO4	76.5	2.5	mg/l	40.0	40.0	91	84-114			
Matrix Spike (W8E1018-MS2)	**Source: 8052107-01**			Analyzed: 05/23/08						
Bromide	428	25	mg/l	400	0.249	107	83-113			
Chloride	575	25	mg/l	200	366	104	72-118			
Nitrate as N	90800	5600	ug/l	90300	733	100	80-107			
Nitrite as N	31100	7600	ug/l	30400	96.0	102	86-111			
Sulfate as SO4	794	25	mg/l	400	404	98	84-114			
Matrix Spike Dup (W8E1018-MSD1)	**Source: 8052109-02**			Analyzed: 05/23/08						
Bromide	43.0	2.5	mg/l	40.0	0.171	107	83-113	0.4	20	
Chloride	45.0	2.5	mg/l	20.0	26.4	93	72-118	0.3	20	
Nitrate as N	12400	560	ug/l	9030	3580	98	80-107	0.08	20	
Nitrite as N	2940	760	ug/l	3040	ND	97	86-111	0.3	20	
Sulfate as SO4	76.8	2.5	mg/l	40.0	40.0	92	84-114	0.4	20	

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1018 - EPA 300.0/300.1										
Matrix Spike Dup (W8E1018-MSD2)		**Source: 8052107-01**		Analyzed: 05/23/08						
Bromide	427	25	mg/l	400	0.249	107	83-113	0.1	20	
Chloride	580	25	mg/l	200	366	107	72-118	0.9	20	
Nitrate as N	90600	5600	ug/l	90300	733	100	80-107	0.3	20	
Nitrite as N	31600	7600	ug/l	30400	96.0	104	86-111	2	20	
Sulfate as SO4	801	25	mg/l	400	404	99	84-114	0.9	20	

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0812 - General Preparation										
Blank (W8E0812-BLK1)				Analyzed: 05/21/08						
Total Dissolved Solids	ND	10	mg/l							
LCS (W8E0812-BS1)				Analyzed: 05/21/08						
Total Dissolved Solids	792	10	mg/l	824		96	91-104			
Duplicate (W8E0812-DUP1)		**Source: 8052109-07**		Analyzed: 05/21/08						
Total Dissolved Solids	ND	10	mg/l		ND				5	
Batch W8E1009 - SM5310										
Blank (W8E1009-BLK1)				Analyzed: 05/27/08						
Total Organic Carbon (TOC)	ND	0.30	mg/l							
LCS (W8E1009-BS1)				Analyzed: 05/27/08						
Total Organic Carbon (TOC)	4.80	0.30	mg/l	5.00		96	90-110			
Matrix Spike (W8E1009-MS1)		**Source: 8052109-07**		Analyzed: 05/27/08						
Total Organic Carbon (TOC)	4.98	0.30	mg/l	5.00	0.108	97	84-107			
Matrix Spike Dup (W8E1009-MSD1)		**Source: 8052109-07**		Analyzed: 05/27/08						
Total Organic Carbon (TOC)	4.89	0.30	mg/l	5.00	0.108	96	84-107	2	20	
Batch W8E1056 - SM5310										
Blank (W8E1056-BLK1)				Analyzed: 05/28/08						
Dissolved Organic Carbon	ND	0.30	mg/l							

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1056 - SM5310										
LCS (W8E1056-BS1)				Analyzed: 05/28/08						
Dissolved Organic Carbon	4.83	0.30	mg/l	5.00		97	80-120			
LCS Dup (W8E1056-BSD1)				Analyzed: 05/28/08						
Dissolved Organic Carbon	4.87	0.30	mg/l	5.00		97	80-120	0.8	20	
Batch W8E1066 - General Preparation										
Blank (W8E1066-BLK1)				Analyzed: 06/03/08						
Total Cyanide	ND	0.0050	mg/l							
LCS (W8E1066-BS1)				Analyzed: 06/03/08						
Total Cyanide	0.0515	0.0050	mg/l	0.0500		103	87-115			
Matrix Spike (W8E1066-MS1)		**Source: 8052157-01**		Analyzed: 06/03/08						
Total Cyanide	0.0538	0.0050	mg/l	0.0500	ND	108	80-117			
Matrix Spike (W8E1066-MS2)		**Source: 8052158-01**		Analyzed: 06/03/08						
Total Cyanide	0.0544	0.0050	mg/l	0.0500	0.00302	103	80-117			
Matrix Spike Dup (W8E1066-MSD1)		**Source: 8052157-01**		Analyzed: 06/03/08						
Total Cyanide	0.0514	0.0050	mg/l	0.0500	ND	103	80-117	5	20	
Matrix Spike Dup (W8E1066-MSD2)		**Source: 8052158-01**		Analyzed: 06/03/08						
Total Cyanide	0.0559	0.0050	mg/l	0.0500	0.00302	106	80-117	3	20	
Batch W8E1146 - General Preparation										
Blank (W8E1146-BLK1)				Analyzed: 05/30/08						
Alkalinity as CaCO3	4.39	2.0	mg/l							B-06
Bicarbonate Alkalinity as HCO3	5.36	2.0	mg/l							B-06
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l							B-06
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l							B-06

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1146 - General Preparation										
LCS (W8E1146-BS1)				Analyzed: 05/30/08						
Alkalinity as CaCO3	46.1	2.0	mg/l	45.3		102	94-108			
Bicarbonate Alkalinity as HCO3	56.2	2.0	mg/l	55.3		102	94-108			
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Duplicate (W8E1146-DUP1)		**Source: 8052109-01**		Analyzed: 05/30/08						
Alkalinity as CaCO3	423	2.0	mg/l		422			0.2	15	
Bicarbonate Alkalinity as HCO3	516	2.0	mg/l		515			0.2	15	
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Batch W8F0092 - General Preparation										
Blank (W8F0092-BLK1)				Analyzed: 05/30/08						
Alkalinity as CaCO3	ND	2.0	mg/l							
Bicarbonate Alkalinity as HCO3	ND	2.0	mg/l							
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l							
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l							
LCS (W8F0092-BS1)				Analyzed: 05/30/08						
Alkalinity as CaCO3	46.2	2.0	mg/l	45.3		102	94-108			
Bicarbonate Alkalinity as HCO3	56.4	2.0	mg/l	55.3		102	94-108			
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Duplicate (W8F0092-DUP1)		**Source: 8051935-02**		Analyzed: 05/30/08						
Alkalinity as CaCO3	24.1	2.0	mg/l		24.1			0	15	
Bicarbonate Alkalinity as HCO3	29.4	2.0	mg/l		29.4			0	15	
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	

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HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1052 - EPA 500 Series										
Blank (W8E1052-BLK1)				Analyzed: 05/29/08						
Surrogate. 2,3-Dibromopropionic acid	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
Bromochloroacetic acid (bcaa)	ND	1.0	ug/l							
Dibromoacetic acid (dbaa)	ND	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	2.0	ug/l							
Total HAA5	ND	5.0	ug/l							
Trichloroacetic acid (tcaa)	ND	1.0	ug/l							
LCS (W8E1052-BS1)				Analyzed: 05/29/08						
Surrogate: 2,3-Dibromopropionic acid	*10.6*		*ug/l*	*10.0*		*106*	*70-130*			
Bromochloroacetic acid (bcaa)	11.0	1.0	ug/l	10.0		110	70-130			
Dibromoacetic acid (dbaa)	11.1	1.0	ug/l	10.0		111	70-130			
Dichloroacetic acid (dcaa)	12.1	1.0	ug/l	10.0		121	70-130			
Monobromoacetic acid (mbaa)	12.3	1.0	ug/l	10.0		123	70-130			
Monochloroacetic acid (mcaa)	11.1	2.0	ug/l	10.0		111	70-130			
Trichloroacetic acid (tcaa)	10.1	1.0	ug/l	10.0		101	70-130			
Matrix Spike (W8E1052-MS1)	**Source: 8051606-01**			Analyzed: 05/29/08						
Surrogate: 2,3-Dibromopropionic acid	*10.3*		*ug/l*	*10.0*		*103*	*70-130*			
Bromochloroacetic acid (bcaa)	10.7	1.0	ug/l	10.0	ND	107	70-130			
Dibromoacetic acid (dbaa)	10.8	1.0	ug/l	10.0	ND	108	70-130			
Dichloroacetic acid (dcaa)	12.0	1.0	ug/l	10.0	ND	120	70-130			
Monobromoacetic acid (mbaa)	11.7	1.0	ug/l	10.0	ND	117	70-130			
Monochloroacetic acid (mcaa)	11.1	2.0	ug/l	10.0	ND	111	70-130			
Trichloroacetic acid (tcaa)	9.81	1.0	ug/l	10.0	ND	98	70-130			
Matrix Spike (W8E1052-MS2)	**Source: 8052109-01**			Analyzed: 05/29/08						
Surrogate: 2,3-Dibromopropionic acid	*9.48*		*ug/l*	*10.0*		*95*	*70-130*			
Bromochloroacetic acid (bcaa)	10.1	1.0	ug/l	10.0	ND	101	70-130			
Dibromoacetic acid (dbaa)	10.1	1.0	ug/l	10.0	ND	101	70-130			
Dichloroacetic acid (dcaa)	11.3	1.0	ug/l	10.0	ND	113	70-130			
Monobromoacetic acid (mbaa)	11.3	1.0	ug/l	10.0	ND	113	70-130			

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1052 - EPA 500 Series										
Matrix Spike (W8E1052-MS2)	**Source: 8052109-01**			Analyzed: 05/29/08						
Monochloroacetic acid (mcaa)	11.0	2.0	ug/l	10.0	ND	110	70-130			
Trichloroacetic acid (tcaa)	8.96	1.0	ug/l	10.0	ND	90	70-130			
Matrix Spike Dup (W8E1052-MSD1)	**Source: 8051606-01**			Analyzed: 06/02/08						
Surrogate: 2,3-Dibromopropionic acid	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			
Bromochloroacetic acid (bcaa)	10.5	1.0	ug/l	10.0	ND	105	70-130	2	30	
Dibromoacetic acid (dbaa)	10.6	1.0	ug/l	10.0	ND	106	70-130	2	30	
Dichloroacetic acid (dcaa)	11.7	1.0	ug/l	10.0	ND	117	70-130	2	30	
Monobromoacetic acid (mbaa)	11.9	1.0	ug/l	10.0	ND	119	70-130	2	30	
Monochloroacetic acid (mcaa)	11.2	2.0	ug/l	10.0	ND	112	70-130	1	30	
Trichloroacetic acid (tcaa)	9.66	1.0	ug/l	10.0	ND	97	70-130	2	30	
Matrix Spike Dup (W8E1052-MSD2)	**Source: 8052109-01**			Analyzed: 05/29/08						
Surrogate: 2,3-Dibromopropionic acid	*10.1*		*ug/l*	*10.0*		*101*	*70-130*			
Bromochloroacetic acid (bcaa)	10.8	1.0	ug/l	10.0	ND	108	70-130	7	30	
Dibromoacetic acid (dbaa)	10.9	1.0	ug/l	10.0	ND	109	70-130	7	30	
Dichloroacetic acid (dcaa)	12.0	1.0	ug/l	10.0	ND	120	70-130	7	30	
Monobromoacetic acid (mbaa)	12.6	1.0	ug/l	10.0	ND	126	70-130	11	30	
Monochloroacetic acid (mcaa)	11.4	2.0	ug/l	10.0	ND	114	70-130	4	30	
Trichloroacetic acid (tcaa)	9.78	1.0	ug/l	10.0	ND	98	70-130	9	30	

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1039 - EPA 200.2										
Blank (W8E1039-BLK1)				Analyzed: 06/03/08						
Calcium	ND	0.10	mg/l							
Magnesium	ND	0.10	mg/l							
Potassium	ND	0.10	mg/l							
Sodium	ND	0.50	mg/l							
Total Boron	ND	10	ug/l							
LCS (W8E1039-BS1)				Analyzed: 06/03/08						
Calcium	49.4	0.10	mg/l	50.2		98	85-115			
Magnesium	49.3	0.10	mg/l	50.2		98	85-115			
Potassium	50.0	0.10	mg/l	52.0		96	85-115			
Sodium	49.3	0.50	mg/l	50.2		98	85-115			
Total Boron	188	10	ug/l	200		94	85-115			
Matrix Spike (W8E1039-MS1)		**Source: 8052109-06**		Analyzed: 06/03/08						
Calcium	103	0.10	mg/l	50.2	53.0	99	70-130			
Magnesium	79.4	0.10	mg/l	50.2	29.0	101	70-130			
Potassium	65.0	0.10	mg/l	52.0	15.1	96	70-130			
Sodium	184	0.50	mg/l	50.2	135	99	70-130			
Total Boron	685	10	ug/l	200	483	101	70-130			
Matrix Spike (W8E1039-MS2)		**Source: 8052109-07**		Analyzed: 06/03/08						
Calcium	49.3	0.10	mg/l	50.2	0.0118	98	70-130			
Magnesium	49.3	0.10	mg/l	50.2	ND	98	70-130			
Potassium	49.7	0.10	mg/l	52.0	0.0797	95	70-130			
Sodium	48.7	0.50	mg/l	50.2	ND	97	70-130			
Total Boron	185	10	ug/l	200	ND	92	70-130			
Matrix Spike Dup (W8E1039-MSD1)		**Source: 8052109-06**		Analyzed: 06/03/08						
Calcium	102	0.10	mg/l	50.2	53.0	98	70-130	0.4	30	
Magnesium	78.7	0.10	mg/l	50.2	29.0	99	70-130	1	30	
Potassium	65.7	0.10	mg/l	52.0	15.1	97	70-130	1	30	
Sodium	180	0.50	mg/l	50.2	135	91	70-130	2	30	
Total Boron	678	10	ug/l	200	483	98	70-130	1	30	

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Metals by EPA 200 Series Methods - Quality Control

Batch W8E1039 - EPA 200.2

Matrix Spike Dup (W8E1039-MSD2) **Source: 8052109-07** Analyzed: 06/03/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Calcium	48.9	0.10	mg/l	50.2	0.0118	97	70-130	0.7	30	
Magnesium	49.0	0.10	mg/l	50.2	ND	97	70-130	0.7	30	
Potassium	50.1	0.10	mg/l	52.0	0.0797	96	70-130	0.8	30	
Sodium	48.3	0.50	mg/l	50.2	ND	96	70-130	0.8	30	
Total Boron	185	10	ug/l	200	ND	93	70-130	0.1	30	

Perchlorate by EPA 314.0 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0082 - EPA 314.0, dir. inj.										
Blank (W8F0082-BLK1)				Analyzed: 06/02/08						
Perchlorate	ND	4.0	ug/l							
Matrix Spike (W8F0082-MS1)		**Source: 8052109-01**		Analyzed: 06/05/08						
Perchlorate	24.2	4.0	ug/l	20.0	4.35	99	80-120			
Matrix Spike Dup (W8F0082-MSD1)		**Source: 8052109-01**		Analyzed: 06/05/08						
Perchlorate	23.4	4.0	ug/l	20.0	4.35	95	80-120	3	15	
Batch W8F0210 - EPA 314.0, dir. inj.										
Blank (W8F0210-BLK1)				Analyzed: 06/04/08						
Perchlorate	ND	4.0	ug/l							
LCS (W8F0210-BS1)				Analyzed: 06/04/08						
Perchlorate	18.7	4.0	ug/l	20.0		93	85-115			
Matrix Spike (W8F0210-MS1)		**Source: 8052109-01**		Analyzed: 06/04/08						
Perchlorate	23.9	4.0	ug/l	20.0	4.35	98	80-120			
Matrix Spike Dup (W8F0210-MSD1)		**Source: 8052109-01**		Analyzed: 06/04/08						
Perchlorate	21.2	4.0	ug/l	20.0	4.35	84	80-120	12	15	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8E0830 - EPA 524.2

Blank (W8E0830-BLK1) Analyzed: 05/21/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	*9.99*		*ug/l*	*10.0*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.80*		*ug/l*	*10.0*		*98*	*70-130*			
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
1,1-Dichloropropene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3 Dichloropropene (Total)	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	0.50	ug/l							
2-Butanone	ND	5.0	ug/l							
2-Chloroethyl vinyl ether	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
4-Methyl-2-pentanone	ND	5.0	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	0.50	ug/l							
Bromomethane	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0830 - EPA 524.2										
Blank (W8E0830-BLK1)				Analyzed: 05/21/08						
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	0.50	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l							
Di-isopropyl ether	ND	3.0	ug/l							
Ethyl tert-butyl ether	ND	3.0	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Freon 113	ND	5.0	ug/l							
Hexachlorobutadiene	ND	0.50	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
m,p-Xylene	ND	1.0	ug/l							
m-Dichlorobenzene	ND	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	3.0	ug/l							
Methylene chloride	ND	0.50	ug/l							
Naphthalene	ND	0.50	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
o-Dichlorobenzene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
p-Dichlorobenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
Tert-amyl methyl ether	ND	3.0	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0830 - EPA 524.2										
Blank (W8E0830-BLK1)				Analyzed: 05/21/08						
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes (total)	ND	0.50	ug/l							
LCS (W8E0830-BS1)				Analyzed: 05/21/08						
Surrogate: 1,2-Dichlorobenzene-d4	*10.6*		*ug/l*	*10.0*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
1,1,1,2-Tetrachloroethane	5.77	0.50	ug/l	6.00		96	70-130			
1,1,1-Trichloroethane	6.01	0.50	ug/l	6.00		100	70-130			
1,1,2,2-Tetrachloroethane	5.95	0.50	ug/l	6.00		99	70-130			
1,1,2-Trichloroethane	5.81	0.50	ug/l	6.00		97	70-130			
1,1-Dichloroethane	6.46	0.50	ug/l	6.00		108	70-130			
1,1-Dichloroethene	6.60	0.50	ug/l	6.00		110	70-130			
1,1-Dichloropropene	6.51	0.50	ug/l	6.00		108	70-130			
1,2,3-Trichlorobenzene	6.51	0.50	ug/l	6.00		108	70-130			
1,2,3-Trichloropropane	5.97	0.50	ug/l	6.00		100	70-130			
1,2,4-Trichlorobenzene	6.18	0.50	ug/l	6.00		103	70-130			
1,2,4-Trimethylbenzene	6.22	0.50	ug/l	6.00		104	70-130			
1,2-Dichloroethane	5.95	0.50	ug/l	6.00		99	70-130			
1,2-Dichloropropane	6.33	0.50	ug/l	6.00		106	70-130			
1,3,5-Trimethylbenzene	6.31	0.50	ug/l	6.00		105	70-130			
1,3-Dichloropropane	5.91	0.50	ug/l	6.00		98	70-130			
2,2-Dichloropropane	6.88	0.50	ug/l	6.00		115	70-130			
2-Butanone	7.44	5.0	ug/l	6.00		124	70-130			
2-Chloroethyl vinyl ether	6.04	1.0	ug/l	6.00		101	70-130			
2-Chlorotoluene	6.23	0.50	ug/l	6.00		104	70-130			
2-Hexanone	6.24	5.0	ug/l	6.00		104	70-130			
4-Chlorotoluene	6.23	0.50	ug/l	6.00		104	70-130			
4-Methyl-2-pentanone	6.14	5.0	ug/l	6.00		102	70-130			
Benzene	6.54	0.50	ug/l	6.00		109	70-130			
Bromobenzene	6.14	0.50	ug/l	6.00		102	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0830 - EPA 524.2										
LCS (W8E0830-BS1)				Analyzed: 05/21/08						
Bromochloromethane	6.23	0.50	ug/l	6.00		104	70-130			
Bromodichloromethane	5.87	0.50	ug/l	6.00		98	70-130			
Bromoform	5.46	0.50	ug/l	6.00		91	70-130			
Bromomethane	7.38	0.50	ug/l	6.00		123	70-130			
Carbon tetrachloride	6.02	0.50	ug/l	6.00		100	70-130			
Chlorobenzene	6.08	0.50	ug/l	6.00		101	70-130			
Chloroethane	6.80	0.50	ug/l	6.00		113	70-130			
Chloroform	5.75	0.50	ug/l	6.00		96	70-130			
Chloromethane	8.13	0.50	ug/l	6.00		136	70-130			Q-08
cis-1,2-Dichloroethene	6.51	0.50	ug/l	6.00		108	70-130			
cis-1,3-Dichloropropene	6.31	0.50	ug/l	6.00		105	70-130			
Dibromochloromethane	5.53	0.50	ug/l	6.00		92	70-130			
Dibromomethane	5.99	0.50	ug/l	6.00		100	70-130			
Dichlorodifluoromethane (Freon 12)	5.86	0.50	ug/l	6.00		98	70-130			
Di-isopropyl ether	6.53	3.0	ug/l	6.00		109	70-130			
Ethyl tert-butyl ether	6.10	3.0	ug/l	6.00		102	70-130			
Ethylbenzene	6.50	0.50	ug/l	6.00		108	70-130			
Freon 113	6.86	5.0	ug/l	6.00		114	70-130			
Hexachlorobutadiene	6.05	0.50	ug/l	6.00		101	70-130			
Isopropylbenzene	6.35	0.50	ug/l	6.00		106	70-130			
m,p-Xylene	12.9	1.0	ug/l	12.0		108	70-130			
m-Dichlorobenzene	5.84	0.50	ug/l	6.00		97	70-130			
Methyl tert-butyl ether (MTBE)	5.77	3.0	ug/l	6.00		96	70-130			
Methylene chloride	5.90	0.50	ug/l	6.00		98	70-130			
Naphthalene	6.63	0.50	ug/l	6.00		110	70-130			
n-Butylbenzene	6.60	0.50	ug/l	6.00		110	70-130			
n-Propylbenzene	6.32	0.50	ug/l	6.00		105	70-130			
o-Dichlorobenzene	5.76	0.50	ug/l	6.00		96	70-130			
o-Xylene	6.33	0.50	ug/l	6.00		106	70-130			
p-Dichlorobenzene	5.86	0.50	ug/l	6.00		98	70-130			
p-Isopropyltoluene	6.33	0.50	ug/l	6.00		106	70-130			
sec-Butylbenzene	6.32	0.50	ug/l	6.00		105	70-130			
Styrene	6.30	0.50	ug/l	6.00		105	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0830 - EPA 524.2										
LCS (W8E0830-BS1)				Analyzed: 05/21/08						
Tert-amyl methyl ether	5.90	3.0	ug/l	6.00		98	70-130			
tert-Butylbenzene	6.22	0.50	ug/l	6.00		104	70-130			
Tetrachloroethene	6.06	0.50	ug/l	6.00		101	70-130			
Toluene	6.50	0.50	ug/l	6.00		108	70-130			
trans-1,2-Dichloroethene	6.82	0.50	ug/l	6.00		114	70-130			
trans-1,3-Dichloropropene	6.19	0.50	ug/l	6.00		103	70-130			
Trichloroethene	5.98	0.50	ug/l	6.00		100	70-130			
Trichlorofluoromethane	6.05	5.0	ug/l	6.00		101	70-130			
Vinyl chloride	7.45	0.50	ug/l	6.00		124	70-130			
LCS Dup (W8E0830-BSD1)				Analyzed: 05/21/08						
Surrogate: 1,2-Dichlorobenzene-d4	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.4*		*ug/l*	*10.0*		*104*	*70-130*			
1,1,1,2-Tetrachloroethane	5.65	0.50	ug/l	6.00		94	70-130	2	30	
1,1,1-Trichloroethane	6.12	0.50	ug/l	6.00		102	70-130	2	30	
1,1,2,2-Tetrachloroethane	5.84	0.50	ug/l	6.00		97	70-130	2	30	
1,1,2-Trichloroethane	5.61	0.50	ug/l	6.00		94	70-130	4	30	
1,1-Dichloroethane	6.46	0.50	ug/l	6.00		108	70-130	0	30	
1,1-Dichloroethene	6.80	0.50	ug/l	6.00		113	70-130	3	30	
1,1-Dichloropropene	6.65	0.50	ug/l	6.00		111	70-130	2	30	
1,2,3-Trichlorobenzene	6.66	0.50	ug/l	6.00		111	70-130	2	30	
1,2,3-Trichloropropane	5.71	0.50	ug/l	6.00		95	70-130	4	30	
1,2,4-Trichlorobenzene	6.20	0.50	ug/l	6.00		103	70-130	0.3	30	
1,2,4-Trimethylbenzene	6.25	0.50	ug/l	6.00		104	70-130	0.5	30	
1,2-Dichloroethane	5.91	0.50	ug/l	6.00		98	70-130	0.7	30	
1,2-Dichloropropane	6.31	0.50	ug/l	6.00		105	70-130	0.3	30	
1,3,5-Trimethylbenzene	6.31	0.50	ug/l	6.00		105	70-130	0	30	
1,3-Dichloropropane	5.90	0.50	ug/l	6.00		98	70-130	0.2	30	
2,2-Dichloropropane	6.92	0.50	ug/l	6.00		115	70-130	0.6	30	
2-Butanone	7.21	5.0	ug/l	6.00		120	70-130	3	30	
2-Chloroethyl vinyl ether	6.22	1.0	ug/l	6.00		104	70-130	3	30	
2-Chlorotoluene	6.20	0.50	ug/l	6.00		103	70-130	0.5	30	
2-Hexanone	6.21	5.0	ug/l	6.00		104	70-130	0.5	30	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8E0830 - EPA 524.2

LCS Dup (W8E0830-BSD1) Analyzed: 05/21/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
4-Chlorotoluene	6.18	0.50	ug/l	6.00		103	70-130	0.8	30	
4-Methyl-2-pentanone	6.04	5.0	ug/l	6.00		101	70-130	2	30	
Benzene	6.50	0.50	ug/l	6.00		108	70-130	0.6	30	
Bromobenzene	6.05	0.50	ug/l	6.00		101	70-130	1	30	
Bromochloromethane	6.10	0.50	ug/l	6.00		102	70-130	2	30	
Bromodichloromethane	5.81	0.50	ug/l	6.00		97	70-130	1	30	
Bromoform	5.52	0.50	ug/l	6.00		92	70-130	1	30	
Bromomethane	7.45	0.50	ug/l	6.00		124	70-130	0.9	30	
Carbon tetrachloride	6.22	0.50	ug/l	6.00		104	70-130	3	30	
Chlorobenzene	6.07	0.50	ug/l	6.00		101	70-130	0.2	30	
Chloroethane	6.80	0.50	ug/l	6.00		113	70-130	0	30	
Chloroform	5.69	0.50	ug/l	6.00		95	70-130	1	30	
Chloromethane	8.08	0.50	ug/l	6.00		135	70-130	0.6	30	Q-08
cis-1,2-Dichloroethene	6.47	0.50	ug/l	6.00		108	70-130	0.6	30	
cis-1,3-Dichloropropene	6.28	0.50	ug/l	6.00		105	70-130	0.5	30	
Dibromochloromethane	5.43	0.50	ug/l	6.00		90	70-130	2	30	
Dibromomethane	5.94	0.50	ug/l	6.00		99	70-130	0.8	30	
Dichlorodifluoromethane (Freon 12)	5.93	0.50	ug/l	6.00		99	70-130	1	30	
Di-isopropyl ether	6.51	3.0	ug/l	6.00		108	70-130	0.3	30	
Ethyl tert-butyl ether	6.12	3.0	ug/l	6.00		102	70-130	0.3	30	
Ethylbenzene	6.50	0.50	ug/l	6.00		108	70-130	0	30	
Freon 113	6.44	5.0	ug/l	6.00		107	70-130	6	30	
Hexachlorobutadiene	6.16	0.50	ug/l	6.00		103	70-130	2	30	
Isopropylbenzene	6.42	0.50	ug/l	6.00		107	70-130	1	30	
m,p-Xylene	12.8	1.0	ug/l	12.0		107	70-130	0.5	30	
m-Dichlorobenzene	5.76	0.50	ug/l	6.00		96	70-130	1	30	
Methyl tert-butyl ether (MTBE)	5.77	3.0	ug/l	6.00		96	70-130	0	30	
Methylene chloride	5.86	0.50	ug/l	6.00		98	70-130	0.7	30	
Naphthalene	6.95	0.50	ug/l	6.00		116	70-130	5	30	
n-Butylbenzene	6.66	0.50	ug/l	6.00		111	70-130	0.9	30	
n-Propylbenzene	6.37	0.50	ug/l	6.00		106	70-130	0.8	30	
o-Dichlorobenzene	5.71	0.50	ug/l	6.00		95	70-130	0.9	30	
o-Xylene	6.34	0.50	ug/l	6.00		106	70-130	0.2	30	

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers

Batch W8E0830 - EPA 524.2

LCS Dup (W8E0830-BSD1) Analyzed: 05/21/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
p-Dichlorobenzene	5.80	0.50	ug/l	6.00		97	70-130	1	30	
p-Isopropyltoluene	6.39	0.50	ug/l	6.00		106	70-130	0.9	30	
sec-Butylbenzene	6.40	0.50	ug/l	6.00		107	70-130	1	30	
Styrene	6.24	0.50	ug/l	6.00		104	70-130	1	30	
Tert-amyl methyl ether	5.85	3.0	ug/l	6.00		98	70-130	0.9	30	
tert-Butylbenzene	6.22	0.50	ug/l	6.00		104	70-130	0	30	
Tetrachloroethene	6.10	0.50	ug/l	6.00		102	70-130	0.7	30	
Toluene	6.53	0.50	ug/l	6.00		109	70-130	0.5	30	
trans-1,2-Dichloroethene	6.94	0.50	ug/l	6.00		116	70-130	2	30	
trans-1,3-Dichloropropene	6.21	0.50	ug/l	6.00		104	70-130	0.3	30	
Trichloroethene	6.01	0.50	ug/l	6.00		100	70-130	0.5	30	
Trichlorofluoromethane	6.22	5.0	ug/l	6.00		104	70-130	3	30	
Vinyl chloride	7.56	0.50	ug/l	6.00		126	70-130	1	30	

Batch W8E0889 - EPA 524.2

Blank (W8E0889-BLK1) Analyzed: 05/22/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	*9.46*		*ug/l*	*10.0*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.71*		*ug/l*	*10.0*		*97*	*70-130*			
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
1,1-Dichloropropene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3 Dichloropropene (Total)	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8E0889 - EPA 524.2

Blank (W8E0889-BLK1) Analyzed: 05/22/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	0.50	ug/l							
2-Butanone	ND	5.0	ug/l							
2-Chloroethyl vinyl ether	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
4-Methyl-2-pentanone	ND	5.0	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	0.50	ug/l							
Bromomethane	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	0.50	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l							
Di-isopropyl ether	ND	3.0	ug/l							
Ethyl tert-butyl ether	ND	3.0	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Freon 113	ND	5.0	ug/l							
Hexachlorobutadiene	ND	0.50	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
m,p-Xylene	ND	1.0	ug/l							
m-Dichlorobenzene	ND	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	3.0	ug/l							

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0889 - EPA 524.2										
Blank (W8E0889-BLK1)				Analyzed: 05/22/08						
Methylene chloride	ND	0.50	ug/l							
Naphthalene	ND	0.50	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
o-Dichlorobenzene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
p-Dichlorobenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
Tert-amyl methyl ether	ND	3.0	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes (total)	ND	0.50	ug/l							
LCS (W8E0889-BS1)				Analyzed: 05/22/08						
Surrogate: 1,2-Dichlorobenzene-d4	*11.0*		*ug/l*	*10.0*		*110*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.8*		*ug/l*	*10.0*		*108*	*70-130*			
1,1,1,2-Tetrachloroethane	5.95	0.50	ug/l	6.00		99	70-130			
1,1,1-Trichloroethane	6.26	0.50	ug/l	6.00		104	70-130			
1,1,2,2-Tetrachloroethane	6.42	0.50	ug/l	6.00		107	70-130			
1,1,2-Trichloroethane	6.16	0.50	ug/l	6.00		103	70-130			
1,1-Dichloroethane	6.64	0.50	ug/l	6.00		111	70-130			
1,1-Dichloroethene	6.93	0.50	ug/l	6.00		116	70-130			
1,1-Dichloropropene	6.78	0.50	ug/l	6.00		113	70-130			
1,2,3-Trichlorobenzene	6.61	0.50	ug/l	6.00		110	70-130			
1,2,3-Trichloropropane	6.30	0.50	ug/l	6.00		105	70-130			

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8E0889 - EPA 524.2

LCS (W8E0889-BS1) Analyzed: 05/22/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
1,2,4-Trichlorobenzene	6.25	0.50	ug/l	6.00		104	70-130			
1,2,4-Trimethylbenzene	6.38	0.50	ug/l	6.00		106	70-130			
1,2-Dichloroethane	6.17	0.50	ug/l	6.00		103	70-130			
1,2-Dichloropropane	6.55	0.50	ug/l	6.00		109	70-130			
1,3,5-Trimethylbenzene	6.43	0.50	ug/l	6.00		107	70-130			
1,3-Dichloropropane	6.27	0.50	ug/l	6.00		104	70-130			
2,2-Dichloropropane	6.99	0.50	ug/l	6.00		116	70-130			
2-Butanone	7.85	5.0	ug/l	6.00		131	70-130			Q-08
2-Chloroethyl vinyl ether	6.52	1.0	ug/l	6.00		109	70-130			
2-Chlorotoluene	6.36	0.50	ug/l	6.00		106	70-130			
2-Hexanone	6.75	5.0	ug/l	6.00		112	70-130			
4-Chlorotoluene	6.35	0.50	ug/l	6.00		106	70-130			
4-Methyl-2-pentanone	6.77	5.0	ug/l	6.00		113	70-130			
Benzene	6.64	0.50	ug/l	6.00		111	70-130			
Bromobenzene	6.30	0.50	ug/l	6.00		105	70-130			
Bromochloromethane	6.50	0.50	ug/l	6.00		108	70-130			
Bromodichloromethane	6.08	0.50	ug/l	6.00		101	70-130			
Bromoform	5.91	0.50	ug/l	6.00		98	70-130			
Bromomethane	7.30	0.50	ug/l	6.00		122	70-130			
Carbon tetrachloride	6.35	0.50	ug/l	6.00		106	70-130			
Chlorobenzene	6.27	0.50	ug/l	6.00		104	70-130			
Chloroethane	6.97	0.50	ug/l	6.00		116	70-130			
Chloroform	5.89	0.50	ug/l	6.00		98	70-130			
Chloromethane	8.16	0.50	ug/l	6.00		136	70-130			Q-08
cis-1,2-Dichloroethene	6.62	0.50	ug/l	6.00		110	70-130			
cis-1,3-Dichloropropene	6.59	0.50	ug/l	6.00		110	70-130			
Dibromochloromethane	5.90	0.50	ug/l	6.00		98	70-130			
Dibromomethane	6.26	0.50	ug/l	6.00		104	70-130			
Dichlorodifluoromethane (Freon 12)	5.98	0.50	ug/l	6.00		100	70-130			
Di-isopropyl ether	6.86	3.0	ug/l	6.00		114	70-130			
Ethyl tert-butyl ether	6.46	3.0	ug/l	6.00		108	70-130			
Ethylbenzene	6.62	0.50	ug/l	6.00		110	70-130			
Freon 113	7.12	5.0	ug/l	6.00		119	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0889 - EPA 524.2										
LCS (W8E0889-BS1)				Analyzed: 05/22/08						
Hexachlorobutadiene	6.11	0.50	ug/l	6.00		102	70-130			
Isopropylbenzene	6.47	0.50	ug/l	6.00		108	70-130			
m,p-Xylene	13.1	1.0	ug/l	12.0		110	70-130			
m-Dichlorobenzene	5.96	0.50	ug/l	6.00		99	70-130			
Methyl tert-butyl ether (MTBE)	6.15	3.0	ug/l	6.00		102	70-130			
Methylene chloride	6.01	0.50	ug/l	6.00		100	70-130			
Naphthalene	6.88	0.50	ug/l	6.00		115	70-130			
n-Butylbenzene	6.68	0.50	ug/l	6.00		111	70-130			
n-Propylbenzene	6.49	0.50	ug/l	6.00		108	70-130			
o-Dichlorobenzene	6.01	0.50	ug/l	6.00		100	70-130			
o-Xylene	6.45	0.50	ug/l	6.00		108	70-130			
p-Dichlorobenzene	6.04	0.50	ug/l	6.00		101	70-130			
p-Isopropyltoluene	6.46	0.50	ug/l	6.00		108	70-130			
sec-Butylbenzene	6.51	0.50	ug/l	6.00		108	70-130			
Styrene	6.47	0.50	ug/l	6.00		108	70-130			
Tert-amyl methyl ether	6.23	3.0	ug/l	6.00		104	70-130			
tert-Butylbenzene	6.34	0.50	ug/l	6.00		106	70-130			
Tetrachloroethene	6.21	0.50	ug/l	6.00		104	70-130			
Toluene	6.59	0.50	ug/l	6.00		110	70-130			
trans-1,2-Dichloroethene	7.02	0.50	ug/l	6.00		117	70-130			
trans-1,3-Dichloropropene	6.58	0.50	ug/l	6.00		110	70-130			
Trichloroethene	6.17	0.50	ug/l	6.00		103	70-130			
Trichlorofluoromethane	6.42	5.0	ug/l	6.00		107	70-130			
Vinyl chloride	7.73	0.50	ug/l	6.00		129	70-130			
LCS Dup (W8E0889-BSD1)				Analyzed: 05/22/08						
Surrogate: 1,2-Dichlorobenzene-d4	*11.1*		*ug/l*	*10.0*		*111*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.8*		*ug/l*	*10.0*		*108*	*70-130*			
1,1,1,2-Tetrachloroethane	5.89	0.50	ug/l	6.00		98	70-130	1	30	
1,1,1-Trichloroethane	6.16	0.50	ug/l	6.00		103	70-130	2	30	
1,1,2,2-Tetrachloroethane	6.27	0.50	ug/l	6.00		104	70-130	2	30	
1.1.2-Trichloroethane	6.15	0.50	ug/l	6.00		102	70-130	0.2	30	
1,1-Dichloroethane	6.55	0.50	ug/l	6.00		109	70-130	1	30	

Locus Technologies	Report ID: 8052109	Date Received: 05/21/08 09:00
299 Fairchild Drive	Project ID: 27011-07-4100	Date Reported: 06/16/08 13:58
Mountain View CA, 94043		

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0889 - EPA 524.2										
LCS Dup (W8E0889-BSD1)				Analyzed: 05/22/08						
1,1-Dichloroethene	6.88	0.50	ug/l	6.00		115	70-130	0.7	30	
1,1-Dichloropropene	6.78	0.50	ug/l	6.00		113	70-130	0	30	
1,2,3-Trichlorobenzene	6.60	0.50	ug/l	6.00		110	70-130	0.2	30	
1,2,3-Trichloropropane	6.19	0.50	ug/l	6.00		103	70-130	2	30	
1,2,4-Trichlorobenzene	6.02	0.50	ug/l	6.00		100	70-130	4	30	
1,2,4-Trimethylbenzene	6.12	0.50	ug/l	6.00		102	70-130	4	30	
1,2-Dichloroethane	6.16	0.50	ug/l	6.00		103	70-130	0.2	30	
1,2-Dichloropropane	6.51	0.50	ug/l	6.00		108	70-130	0.6	30	
1,3,5-Trimethylbenzene	6.21	0.50	ug/l	6.00		104	70-130	3	30	
1,3-Dichloropropane	6.23	0.50	ug/l	6.00		104	70-130	0.6	30	
2,2-Dichloropropane	6.77	0.50	ug/l	6.00		113	70-130	3	30	
2-Butanone	7.88	5.0	ug/l	6.00		131	70-130	0.4	30	Q-08
2-Chloroethyl vinyl ether	6.69	1.0	ug/l	6.00		112	70-130	3	30	
2-Chlorotoluene	6.16	0.50	ug/l	6.00		103	70-130	3	30	
2-Hexanone	6.70	5.0	ug/l	6.00		112	70-130	0.7	30	
4-Chlorotoluene	6.21	0.50	ug/l	6.00		104	70-130	2	30	
4-Methyl-2-pentanone	6.88	5.0	ug/l	6.00		115	70-130	2	30	
Benzene	6.58	0.50	ug/l	6.00		110	70-130	0.9	30	
Bromobenzene	6.21	0.50	ug/l	6.00		104	70-130	1	30	
Bromochloromethane	6.51	0.50	ug/l	6.00		108	70-130	0.2	30	
Bromodichloromethane	6.00	0.50	ug/l	6.00		100	70-130	1	30	
Bromoform	5.90	0.50	ug/l	6.00		98	70-130	0.2	30	
Bromomethane	7.18	0.50	ug/l	6.00		120	70-130	2	30	
Carbon tetrachloride	6.26	0.50	ug/l	6.00		104	70-130	1	30	
Chlorobenzene	6.20	0.50	ug/l	6.00		103	70-130	1	30	
Chloroethane	6.87	0.50	ug/l	6.00		114	70-130	1	30	
Chloroform	5.84	0.50	ug/l	6.00		97	70-130	0.9	30	
Chloromethane	8.10	0.50	ug/l	6.00		135	70-130	0.7	30	Q-08
cis-1,2-Dichloroethene	6.67	0.50	ug/l	6.00		111	70-130	0.8	30	
cis-1,3-Dichloropropene	6.68	0.50	ug/l	6.00		111	70-130	1	30	
Dibromochloromethane	5.89	0.50	ug/l	6.00		98	70-130	0.2	30	
Dibromomethane	6.40	0.50	ug/l	6.00		107	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	5.88	0.50	ug/l	6.00		98	70-130	2	30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8E0889 - EPA 524.2

LCS Dup (W8E0889-BSD1) Analyzed: 05/22/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Di-isopropyl ether	6.84	3.0	ug/l	6.00		114	70-130	0.3	30	
Ethyl tert-butyl ether	6.66	3.0	ug/l	6.00		111	70-130	3	30	
Ethylbenzene	6.50	0.50	ug/l	6.00		108	70-130	2	30	
Freon 113	7.21	5.0	ug/l	6.00		120	70-130	1	30	
Hexachlorobutadiene	5.70	0.50	ug/l	6.00		95	70-130	7	30	
Isopropylbenzene	6.33	0.50	ug/l	6.00		106	70-130	2	30	
m,p-Xylene	12.9	1.0	ug/l	12.0		107	70-130	2	30	
m-Dichlorobenzene	5.81	0.50	ug/l	6.00		97	70-130	3	30	
Methyl tert-butyl ether (MTBE)	6.29	3.0	ug/l	6.00		105	70-130	2	30	
Methylene chloride	5.99	0.50	ug/l	6.00		100	70-130	0.3	30	
Naphthalene	7.01	0.50	ug/l	6.00		117	70-130	2	30	
n-Butylbenzene	6.29	0.50	ug/l	6.00		105	70-130	6	30	
n-Propylbenzene	6.26	0.50	ug/l	6.00		104	70-130	4	30	
o-Dichlorobenzene	5.85	0.50	ug/l	6.00		98	70-130	3	30	
o-Xylene	6.37	0.50	ug/l	6.00		106	70-130	1	30	
p-Dichlorobenzene	5.92	0.50	ug/l	6.00		99	70-130	2	30	
p-Isopropyltoluene	6.18	0.50	ug/l	6.00		103	70-130	4	30	
sec-Butylbenzene	6.23	0.50	ug/l	6.00		104	70-130	4	30	
Styrene	6.37	0.50	ug/l	6.00		106	70-130	2	30	
Tert-amyl methyl ether	6.42	3.0	ug/l	6.00		107	70-130	3	30	
tert-Butylbenzene	6.13	0.50	ug/l	6.00		102	70-130	3	30	
Tetrachloroethene	6.16	0.50	ug/l	6.00		103	70-130	0.8	30	
Toluene	6.53	0.50	ug/l	6.00		109	70-130	0.9	30	
trans-1,2-Dichloroethene	7.00	0.50	ug/l	6.00		117	70-130	0.3	30	
trans-1,3-Dichloropropene	6.63	0.50	ug/l	6.00		110	70-130	0.8	30	
Trichloroethene	6.16	0.50	ug/l	6.00		103	70-130	0.2	30	
Trichlorofluoromethane	6.26	5.0	ug/l	6.00		104	70-130	3	30	
Vinyl chloride	7.62	0.50	ug/l	6.00		127	70-130	1	30	

Notes and Definitions

Q-08	High bias in the QC sample does not affect sample result since analyte was not detected
O-09	This sample was received with the EPA recommended holding time expired
O-04	This analysis was performed outside the EPA recommended holding time
B-06	This analyte was found in the method blank, which was possibly contaminated during sample preparation The batch was accepted since this analyte was either not detected or more than 10 times of the blank value for all the samples in the batch
ND	NOT DETECTED at or above the Reporting Limit If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 12718

PROJECT NAME Recycled Water
PROJECT NUMBER 27011-07-~~3200~~4100
RECORDER C. Newman (SIGN)
SAMPLERS Castro / Murphy (PRINT)
(SIGN)
8052109

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
B. Glass Liter
[✓ C. Plastic 500-ml]
D. Plastic Liter
E. Brass Tube
[✓ F. Other] ______

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H. Blank/Spike]
[✓ I. Other] treated waste

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Laboratories

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	NaOH ~~HNO3~~	HCL	NH4Cl	Field Filtered (check)	DOC-SM5310C	EPA 524.2	EPA 552.2	EPA 314.0	SM4500CN-E					TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	5/19	845	MW-1	19.3	1016	6.24		A	2	1	2	1		X	X	X	X	X					1						
2	↓	950	MW-2	19.8	631	6.51		A	2	1	2	1		↓	↓	↓	↓	↓					1						
3	↓	1050	MW-3	20.0	974	6.65		A	2	1	2	1		↓	↓	↓	↓	↓					1						
4	↓	1200	MW-4 *	21.8	996	6.30		A	2	1	2	1		↓	↓	↓	↓	↓					1						
5	↓	0700	SJ/SC plant					I	2	1	2	1		↓	↓	↓	↓	↓					1						
6	↓	0735	4761	—	—	—		I	2	1	2	1		↓	↓	↓	↓	↓					1						
7	↓	N/A	4762	—	—	—		H	2	1	2	1		↓	↓	↓	↓	↓					1						
8																													
9																													
10																													
11																													
12																													
13																													3.8°C
14																													
15																													
16																													

NOTES / MISCELLANEOUS
* see bottle label for preservative info
* Container for TOC was received broken for ID # MW-4.
JG 5/21/08.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
	JameGimer	5/21/08	9:00

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
commercial courier	cooler	12717	T. Murphy	5/20/08	1600			

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1333 N. CALIFORNIA BLVD., STE. 540 • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ LOS ANGELES • 880 APOLLO ST., STE. 353 • EL SEGUNDO, CA 90245 • (310) 535-4600 • FAX (310) 535-4602
☐ OTHER ______ TEL ______ FAX ______

WHITE: Field Copy YELLOW: Project Copy PINK: Laboratory Copy

1 of 2

REV. 2/99

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 12717

PROJECT NAME Recycled Water
PROJECT NUMBER 27011-07-~~3200~~ 4100
RECORDER C. Newman (SIGN)

SAMPLERS Castro/Murphy (PRINT)
H. Castro / T. Murphy (SIGN)

8052109

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H. Blank/Spike]
[✓ I. Other] treated water

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Weck Laboratories

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_3PO_4	Field Filtered (check)	SM2320B	EPA 200.7	EPA 300.0	TOC-SM5310C	TDS-SM2540C					TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	5/19	845	MW-1	19.3	1016	6.24		A	3	1		1		X	X	X	X	X					1						
2		950	MW-2	19.8	631	6.51		A	3	1		1											1						
3		1050	MW-3	20.0	974	6.65		A	3	1		1											1						
4		1200	MW-4	21.8	996	6.30		A	3	1		1											1						
5		0700	SJ/SC treat	23.2	1236	7.40		I	3	1		1											1						
6		0735	4761	—	—	—		I	3	1		1											1						
7	↓	N/K	4762	—	—	—		H	3	1		1		↓	↓	↓	↓	↓					1						
8																													
9																													
10																													
11																													
12																													
13																													
14																													3.8°
15																													
16																													

NOTES / MISCELLANEOUS
* see bottle label for preservative info

Field / Container Temp.

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
	Janne Gmer	5/21/08	9:00

Container Sealed with Custody Seal: Yes ☐ No ☐

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
commercial courier	cooler	12718	T. Murphy	5/20/08	1600			

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1333 N. CALIFORNIA BLVD., STE. 540 • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ LOS ANGELES • 880 APOLLO ST., STE. 353 • EL SEGUNDO, CA 90245 • (310) 535-4600 • FAX (310) 535-4602
☐ OTHER ______ TEL ______ FAX ______

REV. 2/99

WHITE: Field Copy YELLOW: Project Copy PINK: Laboratory Copy

2 of 2

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.testamericainc.com

2 June, 2008

RECEIVED
JUN - 5 2008
BY:

Norman Wong
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

RE: Recycled Water
Work Order: MRE0508

Enclosed are the results of analyses for samples received by the laboratory on 05/19/08 17:30. If you have any questions concerning this report, please feel free to contact me

Sincerely,

Leticia Reyes

Leticia Reyes
Project Manager

CA ELAP Certificate # 2682

The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

The report shall not be reproduced except in full, without the written approval of the laboratory. The client, by accepting this report, also agrees not to alter any reports whether in the hard copy or electronic format and to use reasonable efforts to preserve the reports in the form and substance originally provided by TestAmerica

For Volatile Analysis a trip blank is required to be provided. If trip blank results are not included in the report, then either the trip blank was not submitted or requested to be analyzed.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Locus Technologies 299 Fairchild Dr Mountain View CA, 94043	Project: Recycled Water Project Number: 27011-07-3200 Project Manager: Norman Wong	MRE0508 **Reported:** 06/02/08 15:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MRE0508-01	Water	05/19/08 08:45	05/19/08 17:30
MW-2	MRE0508-02	Water	05/19/08 09:50	05/19/08 17:30
MW-3	MRE0508-03	Water	05/19/08 10:50	05/19/08 17:30
MW-4	MRE0508-04	Water	05/19/08 12:00	05/19/08 17:30
SJ/SC treat	MRE0508-05	Water	05/19/08 07:00	05/19/08 17:30
4761	MRE0508-06	Water	05/19/08 07:35	05/19/08 17:30
4762	MRE0508-07	Water	05/19/08 00:00	05/19/08 17:30

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Dr Mountain View CA, 94043	Project: Recycled Water Project Number: 27011-07-3200 Project Manager: Norman Wong	MRE0508 **Reported:** 06/02/08 15:44

Conventional Chemistry Parameters by APHA/EPA Methods

TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MRE0508-01) Water Sampled: 05/19/08 08:45 Received: 05/19/08 17:30									
Methylene Blue Active Substances	ND	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
MW-2 (MRE0508-02) Water Sampled: 05/19/08 09:50 Received: 05/19/08 17:30									
Methylene Blue Active Substances	ND	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
MW-3 (MRE0508-03) Water Sampled: 05/19/08 10:50 Received: 05/19/08 17:30									
Methylene Blue Active Substances	ND	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
MW-4 (MRE0508-04) Water Sampled: 05/19/08 12:00 Received: 05/19/08 17:30									
Methylene Blue Active Substances	ND	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
SJ/SC treat (MRE0508-05) Water Sampled: 05/19/08 07:00 Received: 05/19/08 17:30									
Methylene Blue Active Substances	**0.21**	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
4761 (MRE0508-06) Water Sampled: 05/19/08 07:35 Received: 05/19/08 17:30									
Methylene Blue Active Substances	**0.18**	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
4762 (MRE0508-07) Water Sampled: 05/19/08 00:00 Received: 05/19/08 17:30									
Methylene Blue Active Substances	ND	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Dr
Mountain View CA, 94043

Project: Recycled Water
Project Number: 27011-07-3200
Project Manager: Norman Wong

MRE0508
Reported:
06/02/08 15:44

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8E23019 - General Preparation / SM 5540C										
Blank (8E23019-BLK1)				Prepared & Analyzed: 05/20/08						
Methylene Blue Active Substances	ND	0.10	mg/l							
Laboratory Control Sample (8E23019-BS1)				Prepared & Analyzed: 05/20/08						
Methylene Blue Active Substances	0.571	0.10	mg/l	0.600		95	60-120			
Matrix Spike (8E23019-MS1)	**Source: MRE0508-07**			Prepared & Analyzed: 05/20/08						
Methylene Blue Active Substances	0.549	0.10	mg/l	0.600	ND	92	60-120			
Matrix Spike Dup (8E23019-MSD1)	**Source: MRE0508-07**			Prepared & Analyzed: 05/20/08						
Methylene Blue Active Substances	0.616	0.10	mg/l	0.600	ND	103	60-120	11	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

MRE0508

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 12716

PROJECT NAME Recycled Water
PROJECT NUMBER 27011-07-3200
RECORDER C. Newman (SIGN)

SAMPLERS Castro / Murphy (PRINT)
A. Castro Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D. Plastic Liter]
E. Brass Tube
[✓ F. Other plastic 250-ml]

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinsate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H. Blank/Spike]
[✓ I. Other treated water]

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB EM lab P&K

LABORATORY USE ONLY

LAB PROJECT NO. ______

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO₃	HCL		Field Filtered (check)	ANALYSIS REQUESTED: SM9215B	SM9221B	SM9221E	SM9221F	SM5540C					TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
01	1	5/19	0845	MW-1				D/F	A	X					X	X	X	X	X					1						
02	2		0950	MW-2				D/F	A	X					X	X	X	X	X					1						
03	3		1050	MW-3				D/F	A	X					X	X	X	X	X					1						
04	4		1200	MW-4				D/F	A	X					X	X	X	X	X					1						
05	5		0700	SJ/SC treat				D/F	I	X					X	X	X	X	X					1						
06	6		0735	4761				D/F	I	X					X	X	X	X	X					1						
07	7		N/A	4762				D/F	H	X						X	X	X	X					1						
	8																													
	9																													
	10																													
	11																													
	12																													
	13																													
	14																													
	15																													
	16																													

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
		5/19/08	1610
		〃	〃
		5/19/08	1730

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
courier	cooler	NONE		5/19/08	1315	Logan Tran	5/19/08	203pm

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ OTHER ______ TEL ______ FAX ______

REV. 2/99

WHITE: Field Copy YELLOW: Project Copy PINK: Laboratory Copy

PROBLEM CHAIN-OF-CUSTODY

MRE0508

DATE/TIME 05/19/08

CLIENT Locus Tech

CLIENT SERVICES REP Leticia

DATE RECEIVED 05/19/08

TURN AROUND TIME Std

ANALYST AM

PROBLEM

① COC says 1L Poly and 250mL Poly for each sample, but we only recieved the 1L Polys.

RESOLUTION

Client Instruction* Per Logan of EMLab - San Bruno: EMLab will analyze, report, and invoice all of the bacterrological analyses directly to the client. TestAmerica should analyze, report, and invoice only the MBAS to the client.

Telephone Number of Client:

Client Contact for Instruction:

Date and Time of Instruction: 5/22/08, 1320

Date & Time Form Given to Sample Control: 5/22/08, 1325

CLIENT SERVICES REP. SIGNATURE:

DATE/TIME: 5/22/08, 1320

*If client does not return call within 24 hours, please route this form to the Laboratory Director.

White Copy - Client Services

Pink Copy - Sample Control

TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: 0511408 AH F Locus Tech.
REC. BY (PRINT) AM
WORKORDER: MRE0508

DATE REC'D AT LAB: 5/19/08
TIME REC'D AT LAB: 1730
DATE LOGGED IN: 5/23/08

For Regulatory Purposes?
___ DRINKING WATER
___ WASTE WATER
X OTHER

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s) Present / [✓ Absent]
   Intact / Broken*
2. Chain-of-Custody [✓ Present] / Absent*
3. Traffic Reports or Packing List: Present / [✓ Absent]
4. Airbill: Airbill / Sticker
   Present / [✓ Absent]
5. Airbill #: —
6. Sample Labels: [✓ Present] / Absent
7. Sample IDs: [✓ Listed] / Not Listed on Chain-of-Custody
8. Sample Condition: [✓ Intact] / Broken* / Leaking*
9. **Does information on chain-of-custody, traffic reports and sample labels agree? [✓ Yes] / No***
10. Sample received within hold time? [✓ Yes] / No*
11. Adequate sample volume received? [✓ Yes] / No*
12. Proper preservatives used? [✓ Yes] / No*
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / [✓ No*]
14. Read Temp: 4.6°C
    Correction Factor: -10
    Corrected Temp: 3.6°C
    Is corrected temp. 0-6°C? [✓ Yes] / No**

**Exception (if any): Metals / Perchlorate DFF on Ice or Problem COC

LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
01	MW-1	1L Poly	—	—	W	5/19/08	
02	MW-2	↓	↓	↓	↓	↓	
03	MW-3	↓	↓	↓	↓	↓	
04	MW-4	↓	↓	↓	↓	↓	
05	SJ/SC treat	↓	↓	↓	↓	↓	
06	4761	↓	↓	↓	↓	↓	
07	4762	↓	↓	↓	↓	↓	

AM 05/19/08

*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

SAMPLERECEIPTLOG
Revision 9 (10/26/07)

Page 1 of 1

TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: ~~F~~ Locus Tech. 05/19/08 AH
REC. BY (PRINT) AM
WORKORDER: MRE0508

DATE REC'D AT LAB: 5/19/08
TIME REC'D AT LAB: 1730
DATE LOGGED IN: 5/23/08

For Regulatory Purposes?
___ **DRINKING WATER**
___ **WASTE WATER**
X **OTHER**

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s) Present / [✓ Absent]
   Intact / Broken*
2. Chain-of-Custody [✓ Present] / Absent*
3. Traffic Reports or Packing List: Present / [✓ Absent]
4. Airbill: Airbill / Sticker
   Present / [✓ Absent]
5. Airbill #: —
6. Sample Labels: [✓ Present] / Absent
7. Sample IDs: [✓ Listed] / Not Listed on Chain-of-Custody
8. Sample Condition: [✓ Intact] / Broken* / Leaking*
9. **Does information on chain-of-custody, traffic reports and sample labels agree? [✓ Yes] / No***
10. Sample received within hold time? [✓ Yes] / No*
11. Adequate sample volume received? [✓ Yes] / No*
12. Proper preservatives used? [✓ Yes] / No*
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / [✓ No]*
14. Read Temp: 4.6°C
    Correction Factor: -10
    Corrected Temp: 3.6°C
    Is corrected temp. 0-6°C? [✓ Yes] / No**

**Exception (if any): Metals / Perchlorate DFF on ice or Problem COC

LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
01	MW-1	1L Poly	—	—	W	5/19/08	
02	MW-2	↓	↓	↓	↓	↓	
03	MW-3						
04	MW-4						
05	SJ/SC treat						
06	4761						
07	4762						

AM
05/19/08

***IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.**

SAMPLERECEIPTLOG
Revision 9 (10/26/07)

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
JUL 03 2008
MWH LABORATORIES

DATE OF ISSUE
Jun 25 2008
MWH LABORATORIES

for MAG

MAG Matthew Allen Glover
Project Manager

Report#: 241710
Project: RECLAIMED
PO#: 27011-07-320

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 19 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241710
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2805210352	SJ/SC TREAT	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	19-may-2008 07:00:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

241710

MWH LABS USE ONLY:

LOGIN COMMENTS: ____

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: [illegible]

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ **PARTIALLY FROZEN** ___ **THAWED** ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☒ (check for yes)
REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: TOM MURPHY Murphy

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	~~[illegible]~~	NTA and EDTA EPA 300(mod)	Terbuthylazine EPA 525plus										SAMPLER COMMENTS
5/19	0700		SJ/SC treat	FW	X		X	X	X	X	X										

D10010172539492

SCANNED

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:	Joe Sanchez	JOE SANCHEZ	MWH	5-21-08	9:00
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #

Date Sampled

Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# **46884**

Sampler: please return this paper with your samples

Created by MAG

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

SCANNED

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

Laboratory
Hits Report
#241710

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 16:40:58

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210352	**SJ/SC TREAT**				
05/28/08	N-Nitroso dimethylamine (NDMA)		112		ng/l	2.0

SUMMARY OF POSITIVE DATA ONLY.

Laboratory
Data Report
#241710

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

SJ/SC TREAT (2805210352) Sampled on 05/19/08 07:00

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/28/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300	) NTA by Ion Chrom- Subcontract	ND	ug/l	100	1

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) 2,4-Dinitrotoluene	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) 2,6-Dinitrotoluene	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Alpha-BHC	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) alpha-Chlordane	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Diazinon (Qualitative)	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Acenaphthene	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Acenaphthylene	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Acetochlor	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Alachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Aldrin	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Anthracene	ND(Q5)	ug/l	0.02	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Atrazine	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Benz(a)Anthracene	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Benzo(a)pyrene	ND(Q5)	ug/l	0.02	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Benzo(b)Fluoranthene	ND(Q5)	ug/l	0.02	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Benzo(g,h,i)Perylene	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Benzo(k)Fluoranthene	ND(Q5)	ug/l	0.02	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Di(2-Ethylhexyl)phthalate	ND(Q5)	ug/l	0.6	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Beta-BHC	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Butylbenzylphthalate	ND(Q5)	ug/l	0.5	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Bromacil	ND(Q5)	ug/l	0.2	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Butachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Caffeine by method 525mod	ND(Q5)	ug/l	0.02	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Chlorothalonil(Draconil,Bravo)	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Chrysene	ND(Q5)	ug/l	0.02	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Chlorobenzilate	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Chloroneb	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Delta-BHC	ND(Q5)	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Dibenz(a,h)Anthracene	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) 4,4'-DDD	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) 4,4'-DDE	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) 4,4'-DDT	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Dichlorvos (DDVP)	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Di-(2-Ethylhexyl)adipate	ND(Q5)	ug/l	0.6	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Diethylphthalate	ND(Q5)	ug/l	0.5	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Dieldrin	ND(Q5)	ug/l	0.2	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Dimethylphthalate	ND(Q5)	ug/l	0.5	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Dimethoate	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Di-n-Butylphthalate	ND(Q5)	ug/l	1.0	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Di-N-octylphthalate	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Chlorpyrifos (Dursban)	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Endrin Aldehyde	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Endrin	ND(Q5)	ug/l	0.2	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) EPTC	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Endosulfan I (Alpha)	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Endosulfan II (Beta)	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Endosulfan Sulfate	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Fluoranthene	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Fluorene	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) gamma-Chlordane	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Hexachlorobenzene	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Hexachlorocyclopentadiene	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Heptachlor	ND(Q5)	ug/l	0.03	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Heptachlor Epoxide (isomer B)	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Indeno(1,2,3,c,d)Pyrene	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Isophorone	ND(Q5)	ug/l	0.5	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Lindane	ND(Q5)	ug/l	0.04	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Methoxychlor	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Metribuzin	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Malathion	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Molinate	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Metolachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) Naphthalene	ND(BAQ5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2	) trans-Nonachlor	ND(Q5)	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Pentachlorophenol	ND(Q5)	ug/l	1.0	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Pendimethalin	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Permethrin (mixed isomers)	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Phenanthrene	ND(Q5)	ug/l	0.04	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Propachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Parathion	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Pyrene	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Simazine	ND(Q5)	ug/l	0.05	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Terbuthylazine	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Thiobencarb	ND(Q5)	ug/l	0.2	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Terbacil	ND(Q5)	ug/l	0.1	1
05/30/08	06/06/08 14:46	431678	(EPA 525.2)	Trifluralin	ND(Q5)	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	126(Q5)	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	75(Q5)	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	98(Q5)	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/28/08 00:00	429644	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	112	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	106	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:31	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:31	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:31	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFBA-C13	102	% Rec		
			(MWH PFC)	PFOA-C13	104	% Rec		
			(MWH PFC)	PFOS-C13	98	% Rec		

Laboratory
QC Summary
#241710

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/28/2008

2805210352 SJ/SC TREAT Analyzed by: dlo

QC Ref #431678 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210352 SJ/SC TREAT Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210352 SJ/SC TREAT Analyzed by: ali

Report
Comments
#241710

Group Comments

Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210352)

Test: 525 Semivolatiles by GC/MS (EPA 525.2)

Q5 - Sample received with inadequate chemical preservation, but preserved by the laboratory.

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte, but analyte not present in the sample.

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431678 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies (continued)

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.02	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

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Locus Technologies
(continued)

MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

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Locus Technologies
(continued)

LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

Locus Technologies
(continued)

LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

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Locus Technologies
(continued)

LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

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LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL		
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<50	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<20	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<50	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	**Sample**	**EDTA** mg/L	**NTA** mg/L
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:______________________________

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
May 28 2008
MWH LABORATORIES

DATE OF ISSUE
JUN 10 2008
MWH LABORATORIES

01114CA

MAG Matthew Allen Glover
Project Manager

Report#: 241455
Project: RECLAIMED
PO#: 27011-07

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are QC Report,QC Summary,Data Report,Hits Report, totaling 4 page[s].

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF COUSTODY RECORD

24455

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: JK

SAMPLES LOGGED IN BY: JB

SAMPLE TEMP WHEN REC'D AT LAB: 7° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ **PARTIALLY FROZEN** ___ **THAWED** ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ (check for yes)

NON-COMPLIANCE SAMPLES ☑ (check for yes)
REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB#: 27011-07-~~3200~~ 4100

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), *OR* list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: MURPHY/CASTRO

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	Total Phosphate EPA 365.1/D2	SAMPLER COMMENTS
5/19	0845		MW-1	RGW	✓			
↓	0950		MW-2	RGW	✓			
	1050		MW-3	RGW	✓			
	1200		MW-4	RGW	✓			
	0700		SJ/SC treat	FW	✓			
	0735		4761	FW	✓			
	N/A		4762	FW	✓			

*** MATRIX TYPES:**

RSW = Raw Surface Water	CFW = Chlor(am)inated Finished Water	CWW = Chlorinated Waste Water	BW = Bottled Water	SO = Soil
RGW = Raw Ground Water	FW = Other Finished Water	WW = Other Waste Water	SW = Storm Water	SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/19/08	1500
RECEIVED BY:		DESANCHEZ	MWL	5-20-08	[illegible]:00
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-4100
Group#: 241455
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/20/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2805200240	MW-1	OPO4	Water	19-may-2008 08:45:00
2805200241	MW-2	OPO4	Water	19-may-2008 09:50:00
2805200242	MW-3	OPO4	Water	19-may-2008 10:50:00
2805200243	MW-4	OPO4	Water	19-may-2008 12:00:00
2805200244	5J/SC TREAT	OPO4	Water	19-may-2008 07:00:00
2805200245	4761	OPO4	Water	19-may-2008 07:35:00
2805200246	4762	OPO4	Water	19-may-2008 00:00:00

Test Acronym Description

Test Acronym	Description
OPO4	Orthophosphate as P

MWH Laboratories
A Division of MWH Americas, Inc

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Hits Report #241455

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
20-may-2008 14:00:21

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805200240	**MW-1**				
05/20/08	Orthophosphate as P		0.145		mg/l	0.010
	2805200241	**MW-2**				
05/20/08	Orthophosphate as P		0.121		mg/l	0.010
	2805200242	**MW-3**				
05/20/08	Orthophosphate as P		0.151		mg/l	0.010
	2805200243	**MW-4**				
05/20/08	Orthophosphate as P		0.148		mg/l	0.010
	2805200244	**5J/SC TREAT**				
05/20/08	Orthophosphate as P		0.168		mg/l	0.010
	2805200245	**4761**				
05/20/08	Orthophosphate as P		0.175		mg/l	0.010
	2805200246	**4762**				
05/20/08	Orthophosphate as P		0.076		mg/l	0.010

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel. 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Data Report
#241455

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/20/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
MW-1 (2805200240) Sampled on 05/19/08 08:45								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.145	mg/l	0.010	1
MW-2 (2805200241) Sampled on 05/19/08 09:50								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.121	mg/l	0.010	1
MW-3 (2805200242) Sampled on 05/19/08 10:50								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.151	mg/l	0.010	1
MW-4 (2805200243) Sampled on 05/19/08 12:00								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.148	mg/l	0.010	1
5J/SC TREAT (2805200244) Sampled on 05/19/08 07:00								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.168	mg/l	0.010	1
4761 (2805200245) Sampled on 05/19/08 07:35								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.175	mg/l	0.010	1
4762 (2805200246) Sampled on 05/19/08 00:00								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.076	mg/l	0.010	1

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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Summary
#241455

Locus Technologies

QC Ref #427878 - Orthophosphate as P **Analysis Date: 05/20/2008**

2805200240	MW-1	Analyzed by: anh
2805200241	MW-2	Analyzed by: anh
2805200242	MW-3	Analyzed by: anh
2805200243	MW-4	Analyzed by: anh
2805200244	5J/SC TREAT	Analyzed by: anh
2805200245	4761	Analyzed by: anh
2805200246	4762	Analyzed by: anh

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Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Report
#241455

Locus Technologies

QC Ref #427878 Orthophosphate as P

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05210079	MGL		(0-0)	
LCS1	Orthophosphate as P	0.5	0.501	MGL	100.2	(90-110)	
LCS2	Orthophosphate as P	0.5	0.505	MGL	101.0	(90-110)	
MBLK	Orthophosphate as P	ND	<0.010	MGL			
MRL_CHK	Orthophosphate as P	0.010	0.011	MGL	110.0	(50-150)	
MS	Orthophosphate as P	0.5	0.450	MGL	90.0	(80-120)	
MSD	Orthophosphate as P	0.5	0.453	MGL	90.6	(80-120)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only. batch control is based on LCS. Criteria for duplicates are advisory only. unless otherwise specified in the method.

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Jun 25 2008
MWH LABORATORIES

DATE OF ISSUE
JUL 03 2008
MWH LABORATORIES

for MAG

MAG Matthew Allen Glover
Project Manager

Report#: 241727
Project: RECLAIMED
PO#: 27011-07-320

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 19 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241727
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2805210393	MW-4	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	19-may-2008 12:00:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

241727

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLE TEMP WHEN REC'D AT LAB: 2° (Compliance: 4 +/- 2°C)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: SS

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled water)

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms (check for yes) ☐ ☐

NON-COMPLIANCE SAMPLES (check for yes) ☒

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	[illegible] Ho.2	NTA and EDTA EPA 300 (mod)	Terbuthylazine EPA 525 plus	SAMPLER COMMENTS
5/19	1200		MW-4	RGW	X		X	X	X	X	X	

SCANNED

D10010172539450

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Tom Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:	Joe Sanchez	JOE SANCHEZ	MWH	5-21-08	9:00
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ___ OF ___

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #

Date Sampled

Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS
Project Code RECLAIMED
PO# / Job#

RECLAIMED **ProjectName**

BO# **46884**

Sampler: please return this paper with your samples

Created by **MAG**

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

SCANNED
SCANNED

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

Laboratory
Hits Report
#241727

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 17:21:59

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210393	MW-4				

SUMMARY OF POSITIVE DATA ONLY.

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
MW-4 (2805210393)			**Sampled on 05/19/08 12:00**					
	05/28/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300	) NTA by Ion Chrom- Subcontract	ND	ug/l	100	1
			525 Semivolatiles by GC/MS					
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) 2,4-Dinitrotoluene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) 2,6-Dinitrotoluene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Alpha-BHC	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) alpha-Chlordane	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Diazinon (Qualitative)	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Acenaphthene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Acenaphthylene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Acetochlor	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Alachlor	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Aldrin	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Anthracene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Atrazine	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Benz(a)Anthracene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Benzo(a)pyrene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Benzo(b)Fluoranthene	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Benzo(g,h,i)Perylene	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Benzo(k)Fluoranthene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Di(2-Ethylhexyl)phthalate	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Beta-BHC	ND	ug/l	0.6	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Butylbenzylphthalate	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Bromacil	ND	ug/l	0.5	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Butachlor	ND	ug/l	0.2	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Caffeine by method 525mod	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Chrysene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Chlorobenzilate	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Chloroneb	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Delta-BHC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) 4,4'-DDD	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) 4,4'-DDE	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) 4,4'-DDT	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Dichlorvos (DDVP)	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Diethylphthalate	ND	ug/l	0.5	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Dieldrin	ND	ug/l	0.2	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Dimethylphthalate	ND	ug/l	0.5	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Dimethoate	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Di-n-Butylphthalate	ND	ug/l	1.0	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Di-N-octylphthalate	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Endrin Aldehyde	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Endrin	ND	ug/l	0.2	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) EPTC	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Endosulfan I (Alpha)	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Endosulfan II (Beta)	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Endosulfan Sulfate	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Fluoranthene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Fluorene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) gamma-Chlordane	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Hexachlorobenzene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Hexachlorocyclopentadiene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Heptachlor	ND	ug/l	0.03	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Isophorone	ND	ug/l	0.5	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Lindane	ND	ug/l	0.04	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Methoxychlor	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Metribuzin	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Malathion	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Molinate	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Metolachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Naphthalene	ND(BA)	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) trans-Nonachlor	ND	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Thiobencarb	ND	ug/l	0.2	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	71	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	97	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	106	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/29/08 00:00	429644	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	92	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:38	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:38	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:38	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOS-C13	105	% Rec		
			(MWH PFC)	PFOA-C13	110	% Rec		
			(MWH PFC)	PFBA-C13	95	% Rec		

Group Comments

Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210393)

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte not present in the sample.

Laboratory
QC Summary
#241727

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/29/2008

2805210393 MW-4 Analyzed by: dlo

QC Ref #431678 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210393 MW-4 Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210393 MW-4 Analyzed by: ali

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431678 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.02	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

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MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
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LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

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LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

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Locus Technologies
(continued)

LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

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LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

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Locus Technologies
(continued)

LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL		
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<50	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<20	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<50	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	**Sample**	**EDTA mg/L**	**NTA mg/L**
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:______________________________

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

RECEIVED
FEB 25 2009
BY:

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Feb 04 2009
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA
Report#: 241728
Project: RECLAIMED
PO#: 27011-07-320

This report shall not be reproduced except in full, without the written approval of the laboratory.
Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 20 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241728
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id Tests Scheduled	Matrix	Sample Date
2805210405	MW-3 @525PLUS @NDMA @PFC EDTASUB NTASUB	Water	19-may-2008 10:50:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

LOGGED
REVIEWED
STORED

MWH Laboratories
A Division of MWH Americas, Inc.

CHAIN OF CUSTODY RECORD

241728

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: JS

SAMPLE TEMP WHEN REC'D AT LAB: 2° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☑ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA....)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), *OR*

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	~~[illegible]~~	NTA and EDTA - EPA 300(mod)	Terbutylazine - EPA 525 plus	SAMPLER COMMENTS
5/19	1050		MW-3	RGW	X		X	X	~~X~~	X	X	

PPING ONLY

Page 1 of 1

D10010172539418

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:	Joe Sanchez	JOE SANCHEZ	MWH	5-21-08	900
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ___ OF ___

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #
Date Sampled
Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# 46884

Sampler: please return this paper with your samples

Created by MAG

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
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1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#241728

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 17:24:50

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210405	MW-3				

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Data Report
#241728

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
MW-3 (2805210405)			**Sampled on 05/19/08 10:50**					
	05/28/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1
			525 Semivolatiles by GC/MS					
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	2,4-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	2,6-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Alpha-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	alpha-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Diazinon (Qualitative)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Acenaphthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Acenaphthylene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Acetochlor	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Alachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Aldrin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Anthracene	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Atrazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Benz(a)Anthracene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Benzo(a)pyrene	ND(S7E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Benzo(b)Fluoranthene	ND(S7E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Benzo(g,h,i)Perylene	ND(S7E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Benzo(k)Fluoranthene	ND(S7E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND(S7E6)	ug/l	0.6	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Beta-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Butylbenzylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Bromacil	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Butachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Caffeine by method 525mod	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Chrysene	ND(S7E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Chlorobenzilate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Chloroneb	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Delta-BHC	ND(E6)	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Dibenz(a,h)Anthracene	ND(S7E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	4,4'-DDD	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	4,4'-DDE	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	4,4'-DDT	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Dichlorvos (DDVP)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND(E6)	ug/l	0.6	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Diethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Dieldrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Dimethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Dimethoate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Di-n-Butylphthalate	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Di-N-octylphthalate	ND(S7E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Chlorpyrifos (Dursban)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Endrin Aldehyde	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Endrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	EPTC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Endosulfan I (Alpha)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Endosulfan II (Beta)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Endosulfan Sulfate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Fluoranthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Fluorene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	gamma-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Hexachlorobenzene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Hexachlorocyclopentadiene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Heptachlor	ND(E6)	ug/l	0.03	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND(S7E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Isophorone	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Lindane	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Methoxychlor	ND(S7E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Metribuzin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Malathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Molinate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Metolachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Naphthalene	ND(BAE6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	trans-Nonachlor	ND(E6)	ug/l	0.05	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Pentachlorophenol	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Pendimethalin	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Permethrin (mixed isomers)	ND(S7E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Phenanthrene	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Propachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Parathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Pyrene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Simazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Terbuthylazine	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Thiobencarb	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Terbacil	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Trifluralin	ND(E6)	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	104(E6)	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	61(E6)	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	96(E6)	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/29/08 00:00	429644	(ML/EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(ML/EPA 521)	NDMA-D6(50-150)-Int Std	109	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:40	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:40	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:40	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFBA-C13	105	% Rec		
			(MWH PFC)	PFOA-C13	93	% Rec		
			(MWH PFC)	PFOS-C13	99	% Rec		

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Report
Comments
#241728

Group Comments
Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210405)

Test: 525 Semivolatiles by GC/MS (EPA 525.2)
Perylene-d12(70-130) out of limit
Result out of limits: @525PLUS SURR5251 in sample 2805210405
E6 - Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Test: Benzo(a)pyrene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(b)Fluoranthene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(g,h,i)Perylene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(k)Fluoranthene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di(2-Ethylhexyl)phthalate (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Chrysene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Dibenz(a,h)Anthracene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di-N-octylphthalate (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Indeno(1,2,3,c,d)Pyrene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Methoxychlor (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte, but analyte not present in the sample.

Test: Permethrin (mixed isomers) (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

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Laboratory
QC Summary
#241728

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/29/2008

2805210405 MW-3 Analyzed by: dlo

QC Ref #431667 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210405 MW-3 Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210405 MW-3 Analyzed by: ali

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Laboratory
QC Report
#241728

Locus Technologies

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431667 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL		
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies (continued)

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	Sample	EDTA mg/L	NTA mg/L
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:______________________________

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Laboratory Report

for

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Attention: Norman Wong
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DATE OF ISSUE
Feb 04 2009
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

REVISED
S7 wte added 2/4/09

ACCREDITED IN ACCORDANCE WITH
nelac
01114CA

Report#: 241718
Project: RECLAIMED
PO#: 27011-07-320

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Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 20 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241718
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Matrix	Sample Date
2805210360	MW-2	Water	19-may-2008 09:50:00

Tests Scheduled: @525PLUS @NDMA @PFC EDTASUB NTASUB

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

LOGGED
REVIEWED
STORED

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

241718

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: JS

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES (check for yes) ☐
- Requires state forms ☐

NON-COMPLIANCE SAMPLES (check for yes) ☒

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only STD ✗ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX*	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	[illegible]	NTA and EDTA EPA 300 (mod)	Terbuthylazine EPA 525 plus										SAMPLER COMMENTS
5/19	0950		MW-2	RGW	X		X	X	X	X	X										

D10010172539286

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:	Joe Sanchez	JOE SANCHEZ	MWH	5-21-08	[illegible]
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ___ OF ___

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Group #

Date Sampled

Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# 46884

Sampler: please return this paper with your samples

Created by MAG

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

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Laboratory
Hits Report
#241718

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 17:05:38

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210360	MW-2				

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

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Tel: 626 386 1100
Fax: 626 386 1101
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Laboratory
Data Report
#241718

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

MW-2 (2805210360) Sampled on 05/19/08 09:50

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/28/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	2,4-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	2,6-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Alpha-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	alpha-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Diazinon (Qualitative)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Acenaphthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Acenaphthylene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Acetochlor	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Alachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Aldrin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Anthracene	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Atrazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Benz(a)Anthracene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Benzo(a)pyrene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Benzo(b)Fluoranthene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Benzo(g,h,i)Perylene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Benzo(k)Fluoranthene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND(E6S7)	ug/l	0.6	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Beta-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Butylbenzylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Bromacil	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Butachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Caffeine by method 525mod	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Chrysene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Chlorobenzilate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Chloroneb	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Delta-BHC	ND(E6)	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Dibenz(a,h)Anthracene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	4,4'-DDD	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	4,4'-DDE	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	4,4'-DDT	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Dichlorvos (DDVP)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND(E6)	ug/l	0.6	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Diethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Dieldrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Dimethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Dimethoate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Di-n-Butylphthalate	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Di-N-octylphthalate	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Chlorpyrifos (Dursban)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Endrin Aldehyde	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Endrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	EPTC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Endosulfan I (Alpha)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Endosulfan II (Beta)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Endosulfan Sulfate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Fluoranthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Fluorene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	gamma-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Hexachlorobenzene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Hexachlorocyclopentadiene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Heptachlor	ND(E6)	ug/l	0.03	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Isophorone	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Lindane	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Methoxychlor	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Metribuzin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Malathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Molinate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Metolachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Naphthalene	ND(E6BA)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	trans-Nonachlor	ND(E6)	ug/l	0.05	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Pentachlorophenol	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Pendimethalin	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Permethrin (mixed isomers)	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Phenanthrene	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Propachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Parathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Pyrene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Simazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Terbuthylazine	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Thiobencarb	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Terbacil	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Trifluralin	ND(E6)	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	103(E6)	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	60(E6)	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	98(E6)	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/29/08 00:00	429644	(ML/EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(ML/EPA 521)	NDMA-D6(50-150)-Int Std	105	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:38	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:38	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:38	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	102	% Rec		
			(MWH PFC)	PFOS-C13	89	% Rec		
			(MWH PFC)	PFBA-C13	99	% Rec		

Group Comments
Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210360)

Test: 525 Semivolatiles by GC/MS (EPA 525.2)
Perylene-d12(70-130) out of limit
Result out of limits: @525PLUS SURR5251 in sample 2805210360
E6 - Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Test: Benzo(a)pyrene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(b)Fluoranthene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(g,h,i)Perylene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(k)Fluoranthene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di(2-Ethylhexyl)phthalate (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Chrysene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Dibenz(a,h)Anthracene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di-N-octylphthalate (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Indeno(1,2,3,c,d)Pyrene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Methoxychlor (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte not present in the sample.

Test: Permethrin (mixed isomers) (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Summary
#241718

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/29/2008

2805210360	MW-2	Analyzed by: dlo

QC Ref #431667 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210360	MW-2	Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210360	MW-2	Analyzed by: ali

Laboratory
QC Report
#241718

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
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1 800 566 LABS (1 800 566 5227)

Locus Technologies

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431667 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

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Locus Technologies
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RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

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MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

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MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

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Locus Technologies
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LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL	--	
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

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LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	Sample	EDTA mg/L	NTA mg/L
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Feb 04 2009
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

REVISED
S7 note added 2/4/09

01114CA
Report#: 241714
Project: RECLAIMED
PO#: 27011-07-320

This report shall not be reproduced except in full, without the written approval of the laboratory.
Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 20 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241714
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Matrix	Sample Date	Tests Scheduled
2805210357	MW-1	Water	19-may-2008 08:45:00	@525PLUS @NDMA @PFC EDTASUB NTASUB

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

LOGGED
REVIEWED
STORED

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

24M14

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 4 +/- 2°C)

CONDITION OF BLUE ICE: FROZEN ✓ **PARTIALLY FROZEN** ___ **THAWED** ___

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: JS

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☒ (check for yes)
REGULATION INVOLVED: (eg SDWA, Phase V, NPDES, FDA....)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	[illegible]	NTA and EDTA EPA 300 (mod)	Tertathylazine EPA 526 plus	SAMPLER COMMENTS
5/19	0845		MW-1	RGW	X		X	X	X	X	X	

D10010172539559

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:		JOE SANCHEZ	MWH	5-21-08	9:20
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #
Date Sampled
Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS
Project Code RECLAIMED
PO# / Job#

RECLAIMED **ProjectName**

BO# 46884

Sampler: please return this paper with your samples

Created by MAG

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Data Report
#241714

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

MW-1 (2805210357) Sampled on 05/19/08 08:45

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/28/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	2,4-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	2,6-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Alpha-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	alpha-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Diazinon (Qualitative)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Acenaphthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Acenaphthylene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Acetochlor	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Alachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Aldrin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Anthracene	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Atrazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Benz(a)Anthracene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Benzo(a)pyrene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Benzo(b)Fluoranthene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Benzo(g,h,i)Perylene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Benzo(k)Fluoranthene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	0.9(E6S7)	ug/l	0.6	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Beta-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Butylbenzylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Bromacil	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Butachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Caffeine by method 525mod	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Chrysene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Chlorobenzilate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Chloroneb	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Delta-BHC	ND(E6)	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Dibenz(a,h)Anthracene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	4,4'-DDD	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	4,4'-DDE	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	4,4'-DDT	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Dichlorvos (DDVP)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND(E6)	ug/l	0.6	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Diethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Dieldrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Dimethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Dimethoate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Di-n-Butylphthalate	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Di-N-octylphthalate	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Chlorpyrifos (Dursban)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Endrin Aldehyde	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Endrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	EPTC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Endosulfan I (Alpha)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Endosulfan II (Beta)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Endosulfan Sulfate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Fluoranthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Fluorene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	gamma-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Hexachlorobenzene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Hexachlorocyclopentadiene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Heptachlor	ND(E6)	ug/l	0.03	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Isophorone	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Lindane	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Methoxychlor	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Metribuzin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Malathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Molinate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Metolachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Naphthalene	ND(E6BA)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	trans-Nonachlor	ND(E6)	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Pentachlorophenol	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Pendimethalin	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Permethrin (mixed isomers)	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Phenanthrene	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Propachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Parathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Pyrene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Simazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Terbuthylazine	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Thiobencarb	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Terbacil	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Trifluralin	ND(E6)	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	109(E6)	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	50(E6)	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	98(E6)	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/28/08 00:00	429644	(ML/EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(ML/EPA 521)	NDMA-D6(50-150)-Int Std	81	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:37	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:37	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:37	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	101	% Rec		
			(MWH PFC)	PFBA-C13	104	% Rec		
			(MWH PFC)	PFOS-C13	89	% Rec		

Group Comments
Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210357)

Test: 525 Semivolatiles by GC/MS (EPA 525.2)
E6 - Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Test: Benzo(a)pyrene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(b)Fluoranthene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(g,h,i)Perylene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(k)Fluoranthene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di(2-Ethylhexyl)phthalate (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Chrysene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Dibenz(a,h)Anthracene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di-N-octylphthalate (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Indeno(1,2,3,c,d)Pyrene (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Methoxychlor (ML/EPA 525.2)
S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte not present in the sample.

Test: Permethrin (mixed isomers) (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

MWH Laboratories
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750 Royal Oaks Drive, Suite 100
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1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#241714

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 16:54:11

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210357	MW-1				
06/06/08	Di(2-Ethylhexyl)phthalate		0.9	6	ug/l	0.6

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
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Laboratory
QC Summary
#241714

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/28/2008

2805210357	MW-1	Analyzed by: dlo

QC Ref #431667 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210357	MW-1	Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210357	MW-1	Analyzed by: ali

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Laboratory
QC Report
#241714

Locus Technologies

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431667 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

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MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

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Locus Technologies
(continued)

LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

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Locus Technologies
(continued)

LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

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LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL	_	
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies (continued)

MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Metrohm-Peak, LLC

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	Sample	EDTA mg/L	NTA mg/L
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:______________________________

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
JUL 0 3 2008
MWH LABORATORIES

DATE OF ISSUE
Jun 25 2008
MWH LABORATORIES

MAG Matthew Allen Glover
Project Manager

Report#: 241713
Project: RECLAIMED
PO#: 27011-07-032

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 19 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-03200
Group#: 241713
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08.** They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2805210356	4762	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	19-may-2008

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

241713

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: GS

SAMPLES LOGGED IN BY: JC

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☒ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: TOM MURPHY

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA-EPA1625	Perfluorochemicals MWH LC/MS/MS	[illegible]	NTA and EDTA EPA 300 (mod)	Terbuthylazine EPA525plus	SAMPLER COMMENTS
5/19	N/A		4762	FW	X		X	X	~~X~~	X	X	

D10010172539525

SCANNED

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:	Joe Sanchez	JOE SANCHEZ	MWH	5-21-08	9:~
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #

Date Sampled

Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# **46884**

Created by MAG

Sampler: please return this paper with your samples

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

SCANNED

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

Laboratory
Hits Report
#241713

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 16:50:56

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210356	4762				

SUMMARY OF POSITIVE DATA ONLY.

Laboratory
Data Report
#241713

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

4762 (2805210356) **Sampled on 05/19/08 00:00**

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/28/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Naphthalene	ND(BA)	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Thiobencarb	ND	ug/l	0.2	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	84	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	95	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	109	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/28/08 00:00	429644	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	104	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:35	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:35	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:35	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOS-C13	90	% Rec		
			(MWH PFC)	PFBA-C13	94	% Rec		
			(MWH PFC)	PFOA-C13	95	% Rec		

Group Comments

Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210356)

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte not present in the sample.

Laboratory
QC Summary
#241713

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/28/2008

2805210356 4762 Analyzed by: dlo

QC Ref #431678 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210356 4762 Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210356 4762 Analyzed by: ali

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431678 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.02	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies (continued)

LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL		
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<50	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<20	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<50	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Metrohm-Peak, LLC

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	**Sample**	**EDTA** **mg/L**	**NTA** **mg/L**
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:____________________________________

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

RECEIVED
OCT 31 2008
BY:

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Oct 01 2008
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA

Report#: 241730R
Project: RECLAIMED
PO#: 27011-07-320

Report#241730R replaces the original Report.

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 19 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241730
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Matrix	Sample Date
Tests Scheduled			
2805210408	4761	Water	19-may-2008 07:35:00
@525PLUS @NDMA @PFC EDTASUB NTASUB			

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel 626 386 1100
Fax 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

241730

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: JS

SAMPLE TEMP WHEN REC'D AT LAB: 3° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms

NON-COMPLIANCE SAMPLES ☒ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA....)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: Tom Murphy T. Murphy

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA-EPA1625	Perfluorochemicals MWH LC/MS/MS	~~[illegible]~~	NTA and EDTA EPA 360(mod)	Terbuthylazine EPA 525plus	SAMPLER COMMENTS
5/19	0735		4761	FW	X		X	X	X	X	X	

SCANNED

D10010172539666

* **MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Tom Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:	J. Sanchez	J. SANCHEZ	MWH	5/21/08	[illegible]
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #
Date Sampled
Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# 46884

Sampler: please return this paper with your samples

Created by MAG

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

SCANNED

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

MWH Laboratories
A Division of MWH Americas, Inc.

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Monrovia, California 91016-3629
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1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#241730

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 17:28:09

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210408	4761				
05/29/08	N-Nitroso dimethylamine (NDMA)		116		ng/l	2.0
05/25/08	Perfluoro octanoic acid - PFOA		29		ng/l	20

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory Data Report #241730

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

4761 (2805210408) Sampled on 05/19/08 07:35

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/28/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	2,4-Dinitrotoluene	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	2,6-Dinitrotoluene	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Alpha-BHC	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	alpha-Chlordane	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Diazinon (Qualitative)	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Acenaphthene	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Acenaphthylene	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Acetochlor	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Alachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Aldrin	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Anthracene	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Atrazine	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Benz(a)Anthracene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Benzo(a)pyrene	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Benzo(b)Fluoranthene	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Benzo(g,h,i)Perylene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Benzo(k)Fluoranthene	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND(Q5)	ug/l	0.6	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Beta-BHC	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Butylbenzylphthalate	ND(Q5)	ug/l	0.5	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Bromacil	ND(Q5)	ug/l	0.2	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Butachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Caffeine by method 525mod	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Chrysene	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Chlorobenzilate	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Chloroneb	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Delta-BHC	ND(Q5)	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Dibenz(a,h)Anthracene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	4,4'-DDD	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	4,4'-DDE	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	4,4'-DDT	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Dichlorvos (DDVP)	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND(Q5)	ug/l	0.6	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Diethylphthalate	ND(Q5)	ug/l	0.5	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Dieldrin	ND(Q5)	ug/l	0.2	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Dimethylphthalate	ND(Q5)	ug/l	0.5	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Dimethoate	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Di-n-Butylphthalate	ND(Q5)	ug/l	1.0	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Di-N-octylphthalate	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Chlorpyrifos (Dursban)	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Endrin Aldehyde	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Endrin	ND(Q5)	ug/l	0.2	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	EPTC	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Endosulfan I (Alpha)	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Endosulfan II (Beta)	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Endosulfan Sulfate	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Fluoranthene	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Fluorene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	gamma-Chlordane	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Hexachlorobenzene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Hexachlorocyclopentadiene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Heptachlor	ND(Q5)	ug/l	0.03	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Isophorone	ND(Q5)	ug/l	0.5	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Lindane	ND(Q5)	ug/l	0.04	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Methoxychlor	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Metribuzin	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Malathion	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Molinate	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Metolachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Naphthalene	ND(BAQ5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	trans-Nonachlor	ND(Q5)	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Pentachlorophenol	ND(Q5)	ug/l	1.0	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Pendimethalin	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Permethrin (mixed isomers)	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Phenanthrene	ND(Q5)	ug/l	0.04	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Propachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Parathion	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Pyrene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Simazine	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Terbuthylazine	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Thiobencarb	ND(Q5)	ug/l	0.2	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Terbacil	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Trifluralin	ND(Q5)	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	101(Q5)	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	123(Q5)	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	78(Q5)	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/29/08 00:00	429644	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	116	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	62	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:40	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:41	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	29	ng/l	20	1
	05/25/08 11:40	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	101	% Rec		
			(MWH PFC)	PFBA-C13	89	% Rec		
			(MWH PFC)	PFOS-C13	94	% Rec		

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Group Comments

Report revised to include BA flag for naphthalene blank contamination in EPA Method 525.2 results.
Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210408)

Test: 525 Semivolatiles by GC/MS (EPA 525.2)

Q5 - Sample received with inadequate chemical preservation, but preserved by the laboratory.

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte, but analyte not present in the sample.

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Laboratory
QC Summary
#241730

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/29/2008

2805210408 4761 Analyzed by: dlo

QC Ref #433479 - 525 Semivolatiles by GC/MS Analysis Date: 06/09/2008

2805210408 4761 Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210408 4761 Analyzed by: ali
2805210408 4761 Analyzed by: ali

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Laboratory
QC Report
#241730

Locus Technologies

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #433479 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Locus Technologies
(continued)

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.02	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

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Locus Technologies
(continued)

MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Locus Technologies
(continued)

LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

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Locus Technologies
(continued)

LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

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LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

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Locus Technologies
(continued)

LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL		
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Thiobencarb	ND	<0.2	UGL			
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)	
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)	
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)	
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)	
MBLK	Terbacil	ND	<0.1	UGL			
MS	Terbacil	2	2.09	UGL	104.5	(70-130)	
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)	
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)	
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)	
MBLK	Trifluralin	ND	<0.1	UGL			
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)	
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)	

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Metrohm-Peak, LLC

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	**Sample**	**EDTA** **mg/L**	**NTA** **mg/L**
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:______________________

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-3200; Recycled Water
EML ID: 423730

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 05-22-2008

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-3200; Recycled Water

Date of Sampling: 05-19-2008
Date of Receipt: 05-19-2008
Date of Report: 05-22-2008

HETEROTROPHIC PLATE COUNT REPORT

Location:	1: MW-1	2: MW-2	3: MW-3
Comments (see below)	None	None	None
Lab ID-Version‡:	1862214-1	1862216-1	1862218-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:1	Plate Count Agar 1:1
Setup Time	05/19/2008 at 04:05 PM	05/19/2008 at 04:05 PM	05/19/2008 at 04:05 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	2,000	92	65

Comments:

Location:	4: MW-4	5: SJ/SC treat	6: 4761
Comments (see below)	None	None	None
Lab ID-Version‡:	1862220-1	1862222-1	1862224-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:1	Plate Count Agar 1:1
Setup Time	05/19/2008 at 04:05 PM	05/19/2008 at 04:05 PM	05/19/2008 at 04:05 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	1,200	2	6

Comments:

* Estimated result

‡ A "Version" greater than 1 indicates amended data.

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-3200; Recycled Water
EML ID: 423730

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 05-22-2008
MPN-Standard Bacteria: 05-27-2008

Project SOPs: MPN-Standard Bacteria (100130)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-3200; Recycled Water

Date of Sampling: 05-19-2008
Date of Receipt: 05-19-2008
Date of Report: 05-27-2008

MPN REPORT

Location: 1, MW-1 Lab ID-Version‡: 1862215-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	11	4	30
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

Location: 2, MW-2 Lab ID-Version‡: 1862217-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	2	0.01	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

Location: 3, MW-3 Lab ID-Version‡: 1862219-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	< 2	-	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-3200; Recycled Water

Date of Sampling: 05-19-2008
Date of Receipt: 05-19-2008
Date of Report: 05-27-2008

MPN REPORT

Location: 4, MW-4 Lab ID-Version‡: 1862221-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	< 2	-	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

Location: 5, SJ/SC treat Lab ID-Version‡: 1862223-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	< 2	-	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

Location: 6, 4761 Lab ID-Version‡: 1862225-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	< 2	-	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
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EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-3200; Recycled Water

Date of Sampling: 05-19-2008
Date of Receipt: 05-19-2008
Date of Report: 05-27-2008

MPN REPORT

Location: 7, 4762

Lab ID-Version‡: 1862227-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	< 2	-	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

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info@wecklabs.com www.wecklabs.com

CERTIFICATE OF ANALYSIS

Client: Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong

Phone: (650) 641-8258
Fax: (650) 960-0739

Report Date: 08/28/08 10:20
Received Date: 07/02/08 09:00
Turn Around: Normal

Work Order #: 8070220

Client Project: Recycled Water Bench Test

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Norman Wong :

Enclosed are the results of analyses for samples received 07/02/08 09:00 with the Chain of Custody document. The samples were received in good condition. The samples were received at 5.3 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Hai Van Nguyen
Project Manager

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8070220
Project ID: Recycled Water Bench Test

Date Received: 07/02/08 09:00
Date Reported: 08/28/08 10:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
SJ / SC -2 2415M	Vector Engineering		8070220-01	Water	07/01/08 10:00
DI-2 2415Q	Vector Engineering		8070220-02	Water	07/01/08 11:00
SCRWA-2 2415O	Vector Engineering		8070220-03	Water	07/01/08 11:00
SJ/SC-C 2514C	Client		8070220-04	Water	07/01/08 09:00
SJ/SC-C 2514C	Client		8070220-05	Water	07/01/08 13:30
SJ/SC-D 2514D	Client		8070220-06	Water	07/01/08 09:00
SJ/SC-D 2514D	Client		8070220-07	Water	07/01/08 13:30
SCRWA-B 2514F	Client		8070220-08	Water	07/01/08 09:00
SCRWA-B 2514F	Client		8070220-09	Water	07/01/08 13:30
SCRWA-C 2514G	Client		8070220-10	Water	07/01/08 09:00
SCRWA-C 2514G	Client		8070220-11	Water	07/01/08 13:30
SCRWA-D 2514H	Client		8070220-12	Water	07/01/08 09:00
SCRWA-D 2514H	Client		8070220-13	Water	07/01/08 13:30
DI-C 2514K	Client		8070220-14	Water	07/01/08 09:00
DI-C 2514K	Client		8070220-15	Water	07/01/08 13:30
SJ / SC-1 2514 L	Client		8070220-16	Water	07/01/08 09:00
DI-1 2514 P	Client		8070220-17	Water	07/01/08 09:00
SCRWA-1 2514 N	Client		8070220-18	Water	07/01/08 09:00

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8070220
Project ID: Recycled Water Bench Test

Date Received: 07/02/08 09:00
Date Reported: 08/28/08 10:20

SJ / SC -2 2415M 8070220-01 (Water) **Date** **07/01/08 10:00**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Chloride	**210**	mg/l	5.0	10	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Nitrite as N	**1700**	ug/l	150	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Nitrate as N	**7500**	ug/l	110	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Sulfate as SO4	**100**	mg/l	5.0	10	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**170**	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Bicarbonate Alkalinity as HCO3	**210**	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8G0384	07/10/08	07/14/08	hml	
Dissolved Organic Carbon	**6.0**	mg/l	0.30	1	SM5310C	W8G0559	07/15/08	07/15/08	jlp	
Phosphorus, Total as P	**0.54**	mg/l	0.050	1	EPA 365.3	W8G0624	07/16/08	07/16/08	sml	
Total Organic Carbon (TOC)	**6.0**	mg/l	0.30	1	SM5310C	W8G0554	07/14/08	07/14/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Dichloroacetic acid (dcaa)	**1.2**	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Total HAA5	**1.2**	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	112	%	*70-130*		*EPA 552.2*	*W8G0200*	*07/07/08*	*07/09/08*	cwn	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8070220 Project ID: Recycled Water Bench Test	Date Received: 07/02/08 09:00 Date Reported: 08/28/08 10:20

SJ / SC -2 2415M 8070220-01 (Water) Date 07/01/08 10:00

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	470	ug/l	10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Calcium	52	mg/l	0.10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Potassium	17	mg/l	0.10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Magnesium	28	mg/l	0.10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Sodium	140	mg/l	0.50	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8G0377	07/09/08	07/09/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8070220
Project ID: Recycled Water Bench Test

Date Received: 07/02/08 09:00
Date Reported: 08/28/08 10:20

SJ / SC -2 2415M 8070220-01 (Water) Date 07/01/08 10:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromodichloromethane	**1.4**	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chloroform	**1.9**	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8070220 Project ID: Recycled Water Bench Test	Date Received: Date Reported:	07/02/08 09:00 08/28/08 10:20

SJ / SC -2 2415M   8070220-01 (Water)   Date   07/01/08 10:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	99	%	*70-130*		*EPA 524.2*	*W8G0098*	*07/02/08*	*07/03/08*	mdt	
Surrogate: 4-Bromofluorobenzene	98	%	*70-130*		*EPA 524.2*	*W8G0098*	*07/02/08*	*07/03/08*	mdt	

DI-2 2415Q   8070220-02 (Water)   Date   07/01/08 11:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Chloride	ND	mg/l	0.50	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Nitrate as N	ND	ug/l	110	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8070220 Project ID: Recycled Water Bench Test	Date Received: Date Reported:	07/02/08 09:00 08/28/08 10:20

DI-2 2415Q 8070220-02 (Water) **Date** **07/01/08 11:00**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Sulfate as SO4	ND	mg/l	0.50	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Bicarbonate Alkalinity as HCO3	ND	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8G0384	07/10/08	07/14/08	hml	
Dissolved Organic Carbon	ND	mg/l	0.30	1	SM5310C	W8G0559	07/15/08	07/15/08	jlp	
Phosphorus, Total as P	ND	mg/l	0.050	1	EPA 365.3	W8G0624	07/16/08	07/16/08	sml	
Total Organic Carbon (TOC)	ND	mg/l	0.30	1	SM5310C	W8G0554	07/14/08	07/14/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/09/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	104	%	*70-130*		*EPA 552.2*	*W8G0200*	*07/07/08*	*07/09/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	ND	ug/l	10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Calcium	ND	mg/l	0.10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Potassium	ND	mg/l	0.10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8070220 Project ID: Recycled Water Bench Test	Date Received: Date Reported:	07/02/08 09:00 08/28/08 10:20

DI-2 2415Q 8070220-02 (Water) Date 07/01/08 11:00

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Magnesium	ND	mg/l	0.10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Sodium	ND	mg/l	0.50	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8G0377	07/09/08	07/09/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Butanone	**16**	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	

DI-2 2415Q 8070220-02 (Water) **Date** **07/01/08 11:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	

DI-2 2415Q 8070220-02 (Water) Date **07/01/08 11:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	97	%	*70-130*		*EPA 524.2*	*W8G0098*	*07/02/08*	*07/03/08*	mdt	
Surrogate: 4-Bromofluorobenzene	96	%	*70-130*		*EPA 524.2*	*W8G0098*	*07/02/08*	*07/03/08*	mdt	

SCRWA-2 2415O 8070220-03 (Water) Date **07/01/08 11:00**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Chloride	**220**	mg/l	5.0	10	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Nitrate as N	**3400**	ug/l	110	1	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	
Sulfate as SO4	**82**	mg/l	5.0	10	EPA 300.0	W8G0105	07/02/08	07/02/08	mac	

SCRWA-2 2415O 8070220-03 (Water) **Date** **07/01/08 11:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**250**	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Bicarbonate Alkalinity as HCO3	**300**	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8G0249	07/08/08	07/08/08	ltt	
Total Cyanide	ND	ug/l	5.0	1	EPA 335.4	W8G0384	07/10/08	07/14/08	hml	
Dissolved Organic Carbon	**4.1**	mg/l	0.30	1	SM5310C	W8G0559	07/15/08	07/15/08	jlp	
Phosphorus, Total as P	**4.6**	mg/l	1.2	25	EPA 365.3	W8G0948	07/24/08	07/28/08	sml	
Total Organic Carbon (TOC)	**4.0**	mg/l	0.30	1	SM5310C	W8G0554	07/14/08	07/14/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/10/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/10/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/10/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/10/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8G0200	07/07/08	07/10/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8G0200	07/07/08	07/10/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8G0200	07/07/08	07/10/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	113	%	*70-130*		*EPA 552.2*	*W8G0200*	*07/07/08*	*07/10/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	**430**	ug/l	10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Calcium	**54**	mg/l	0.10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Potassium	**32**	mg/l	0.10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Magnesium	**32**	mg/l	0.10	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	
Sodium	**160**	mg/l	0.50	1	EPA 200.7	W8G0092	07/03/08	07/09/08	jba	

SCRWA-2 2415O 8070220-03 (Water) Date 07/01/08 11:00

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8G0377	07/09/08	07/09/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8070220 Project ID: Recycled Water Bench Test	Date Received: Date Reported:	07/02/08 09:00 08/28/08 10:20

SCRWA-2 2415O 8070220-03 (Water) Date 07/01/08 11:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromodichloromethane	**5.7**	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chloroform	**21**	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Dibromochloromethane	**1.2**	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	

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SCRWA-2 2415O 8070220-03 (Water) Date 07/01/08 11:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8G0098	07/02/08	07/03/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	99	%	*70-130*		*EPA 524.2*	*W8G0098*	*07/02/08*	*07/03/08*	mdt	
Surrogate: 4-Bromofluorobenzene	96	%	*70-130*		*EPA 524.2*	*W8G0098*	*07/02/08*	*07/03/08*	mdt	

SJ/SC-C 2514C 8070220-04 (Water) Date 07/01/08 09:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	0.26	mg/l	0.050	1	EPA 365.3	W8G0624	07/16/08	07/16/08	sml	

SJ/SC-C 2514C 8070220-05 (Water) Date 07/01/08 13:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	0.27	mg/l	0.050	1	EPA 365.3	W8G0624	07/16/08	07/16/08	sml	

SJ/SC-D 2514D 8070220-06 (Water) Date 07/01/08 09:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	0.28	mg/l	0.050	1	EPA 365.3	W8G0624	07/16/08	07/16/08	sml	

SJ/SC-D 2514D 8070220-07 (Water) Date 07/01/08 13:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	**0.053**	mg/l	0.050	1	EPA 365.3	W8G0624	07/16/08	07/16/08	sml	

SCRWA-B 2514F 8070220-08 (Water) Date 07/01/08 09:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	**0.32**	mg/l	0.050	1	EPA 365.3	W8G0624	07/16/08	07/16/08	sml	

SCRWA-B 2514F 8070220-09 (Water) Date 07/01/08 13:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	ND	mg/l	0.050	1	EPA 365.3	W8G0624	07/16/08	07/16/08	sml	

SCRWA-C 2514G 8070220-10 (Water) Date 07/01/08 09:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	**0.46**	mg/l	0.050	1	EPA 365.3	W8G0624	07/16/08	07/16/08	sml	

SCRWA-C 2514G 8070220-11 (Water) Date 07/01/08 13:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	**2.3**	mg/l	1.2	25	EPA 365.3	W8G0948	07/24/08	07/28/08	sml	

SCRWA-D 2514H 8070220-12 (Water) Date 07/01/08 09:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	**2.9**	mg/l	1.2	25	EPA 365.3	W8G0948	07/24/08	07/28/08	sml	

SCRWA-D 2514H 8070220-13 (Water) Date 07/01/08 13:30

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SCRWA-D 2514H 8070220-13 (Water) Date 07/01/08 13:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	18	mg/l	1.2	25	EPA 365.3	W8G0948	07/24/08	07/28/08	sml	

DI-C 2514K 8070220-14 (Water) Date 07/01/08 09:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	0.42	mg/l	0.050	1	EPA 365.3	W8G0627	07/16/08	07/17/08	sml	

DI-C 2514K 8070220-15 (Water) Date 07/01/08 13:30

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	0.48	mg/l	0.050	1	EPA 365.3	W8G0627	07/16/08	07/17/08	sml	

SJ / SC-1 2514 L 8070220-16 (Water) Date 07/01/08 09:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	0.44	mg/l	0.050	1	EPA 365.3	W8G0627	07/16/08	07/17/08	sml	

DI-1 2514 P 8070220-17 (Water) Date 07/01/08 09:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	ND	mg/l	0.050	1	EPA 365.3	W8G0627	07/16/08	07/17/08	sml	

SCRWA-1 2514 N 8070220-18 (Water) Date 07/01/08 09:00

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Phosphorus, Total as P	3.9	mg/l	1.2	25	EPA 365.3	W8G0948	07/24/08	07/28/08	sml	

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QUALITY CONTROL SECTION

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8070220 Project ID: Recycled Water Bench Test	Date Received: Date Reported:	07/02/08 09:00 08/28/08 10:20

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0105 - EPA 300.0/300.1										
Blank (W8G0105-BLK1)				Analyzed: 07/02/08						
Bromide	ND	0.50	mg/l							
Chloride	ND	0.50	mg/l							
Nitrate as N	ND	110	ug/l							
Nitrite as N	ND	150	ug/l							
Sulfate as SO4	ND	0.50	mg/l							
LCS (W8G0105-BS1)				Analyzed: 07/02/08						
Bromide	8.77	0.50	mg/l	8.00		110	90-110			
Chloride	4.20	0.50	mg/l	4.00		105	90-110			
Nitrate as N	1860	110	ug/l	1810		103	90-110			
Nitrite as N	603	150	ug/l	608		99	90-110			
Sulfate as SO4	8.16	0.50	mg/l	8.00		102	90-110			
Matrix Spike (W8G0105-MS1)		**Source: 8062617-03**		Analyzed: 07/03/08						
Bromide	88.0	5.0	mg/l	80.0	ND	110	83-113			
Chloride	96.0	5.0	mg/l	40.0	53.0	107	72-118			
Nitrate as N	19500	1100	ug/l	18100	900	103	80-107			
Nitrite as N	6030	1500	ug/l	6080	ND	99	86-111			
Sulfate as SO4	151	5.0	mg/l	80.0	70.6	101	84-114			
Matrix Spike (W8G0105-MS2)		**Source: 8062631-01**		Analyzed: 07/03/08						
Bromide	438	25	mg/l	400	0.242	109	83-113			
Chloride	478	25	mg/l	200	260	109	72-118			
Nitrate as N	110000	5600	ug/l	90300	17400	103	80-107			
Nitrite as N	29800	7600	ug/l	30400	178	97	86-111			
Sulfate as SO4	889	25	mg/l	400	485	101	84-114			
Matrix Spike Dup (W8G0105-MSD1)		**Source: 8062617-03**		Analyzed: 07/03/08						
Bromide	88.0	5.0	mg/l	80.0	ND	110	83-113	0.07	20	
Chloride	96.7	5.0	mg/l	40.0	53.0	109	72-118	0.7	20	
Nitrate as N	19400	1100	ug/l	18100	900	102	80-107	0.8	20	
Nitrite as N	5980	1500	ug/l	6080	ND	98	86-111	0.8	20	
Sulfate as SO4	151	5.0	mg/l	80.0	70.6	101	84-114	0.1	20	

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0105 - EPA 300.0/300.1										
Matrix Spike Dup (W8G0105-MSD2)		**Source: 8062631-01**		Analyzed: 07/03/08						
Bromide	438	25	mg/l	400	0.242	109	83-113	0.05	20	
Chloride	475	25	mg/l	200	260	107	72-118	0.6	20	
Nitrate as N	109000	5600	ug/l	90300	17400	102	80-107	0.9	20	
Nitrite as N	29800	7600	ug/l	30400	178	97	86-111	0.2	20	
Sulfate as SO4	886	25	mg/l	400	485	100	84-114	0.4	20	

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0249 - General Preparation										
Blank (W8G0249-BLK1)				Analyzed: 07/08/08						
Alkalinity as CaCO3	ND	2.0	mg/l							
Bicarbonate Alkalinity as HCO3	ND	2.0	mg/l							
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l							
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l							
LCS (W8G0249-BS1)				Analyzed: 07/08/08						
Alkalinity as CaCO3	43.3	2.0	mg/l	45.3		96	94-108			
Bicarbonate Alkalinity as HCO3	52.9	2.0	mg/l	55.3		96	94-108			
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Duplicate (W8G0249-DUP1)	**Source: 8070133-03**			Analyzed: 07/08/08						
Alkalinity as CaCO3	101	2.0	mg/l		96.6			5	15	
Bicarbonate Alkalinity as HCO3	123	2.0	mg/l		117			5	15	
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Batch W8G0384 - General Preparation										
Blank (W8G0384-BLK1)				Analyzed: 07/14/08						
Total Cyanide	ND	5.0	ug/l							
LCS (W8G0384-BS1)				Analyzed: 07/14/08						
Total Cyanide	52.6	5.0	ug/l	50.0		105	90-110			
Matrix Spike (W8G0384-MS1)	**Source: 8070220-01**			Analyzed: 07/14/08						
Total Cyanide	43.1	5.0	ug/l	50.0	ND	86	90-110			MS-01

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0384 - General Preparation										
Matrix Spike (W8G0384-MS2)	**Source: 8070220-02**			Analyzed: 07/14/08						
Total Cyanide	50.7	5.0	ug/l	50.0	ND	101	90-110			
Matrix Spike Dup (W8G0384-MSD1)	**Source: 8070220-01**			Analyzed: 07/14/08						
Total Cyanide	40.5	5.0	ug/l	50.0	ND	81	90-110	6	20	MS-01
Matrix Spike Dup (W8G0384-MSD2)	**Source: 8070220-02**			Analyzed: 07/14/08						
Total Cyanide	28.5	5.0	ug/l	50.0	ND	57	90-110	56	20	MS-01
Batch W8G0554 - SM5310										
Blank (W8G0554-BLK1)				Analyzed: 07/14/08						
Total Organic Carbon (TOC)	ND	0.30	mg/l							
LCS (W8G0554-BS1)				Analyzed: 07/14/08						
Total Organic Carbon (TOC)	4.85	0.30	mg/l	5.00		97	90-110			
Matrix Spike (W8G0554-MS1)	**Source: 8070235-11**			Analyzed: 07/14/08						
Total Organic Carbon (TOC)	5.05	0.30	mg/l	5.00	0.266	96	84-107			
Matrix Spike Dup (W8G0554-MSD1)	**Source: 8070235-11**			Analyzed: 07/14/08						
Total Organic Carbon (TOC)	5.03	0.30	mg/l	5.00	0.266	95	84-107	0.5	20	
Batch W8G0559 - SM5310										
Blank (W8G0559-BLK1)				Analyzed: 07/15/08						
Dissolved Organic Carbon	ND	0.30	mg/l							

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0559 - SM5310										
LCS (W8G0559-BS1)				Analyzed: 07/15/08						
Dissolved Organic Carbon	4.88	0.30	mg/l	5.00		98	80-120			
LCS Dup (W8G0559-BSD1)				Analyzed: 07/15/08						
Dissolved Organic Carbon	4.88	0.30	mg/l	5.00		98	80-120	0.01	20	
Batch W8G0624 - General Preparation										
Blank (W8G0624-BLK1)				Analyzed: 07/16/08						
Phosphorus, Total as P	ND	0.050	mg/l							
LCS (W8G0624-BS1)				Analyzed: 07/16/08						
Phosphorus, Total as P	0.217	0.050	mg/l	0.200		108	85-109			
Matrix Spike (W8G0624-MS1)		**Source: 8070220-01**		Analyzed: 07/16/08						
Phosphorus, Total as P	0.741	0.050	mg/l	0.200	0.535	103	71-118			
Matrix Spike Dup (W8G0624-MSD1)		**Source: 8070220-01**		Analyzed: 07/16/08						
Phosphorus, Total as P	0.725	0.050	mg/l	0.200	0.535	95	71-118	2	20	
Batch W8G0627 - General Preparation										
Blank (W8G0627-BLK1)				Analyzed: 07/17/08						
Phosphorus, Total as P	ND	0.050	mg/l							
LCS (W8G0627-BS1)				Analyzed: 07/17/08						
Phosphorus, Total as P	0.183	0.050	mg/l	0.200		92	85-109			

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0627 - General Preparation										
Matrix Spike (W8G0627-MS1)		**Source: 8070370-01**		Analyzed: 07/17/08						
Phosphorus, Total as P	0.240	0.050	mg/l	0.200	0.0600	90	71-118			
Matrix Spike Dup (W8G0627-MSD1)		**Source: 8070370-01**		Analyzed: 07/17/08						
Phosphorus, Total as P	0.247	0.050	mg/l	0.200	0.0600	94	71-118	3	20	
Batch W8G0948 - General Preparation										
Blank (W8G0948-BLK1)				Analyzed: 07/28/08						
Phosphorus, Total as P	ND	0.050	mg/l							
LCS (W8G0948-BS1)				Analyzed: 07/28/08						
Phosphorus, Total as P	0.217	0.050	mg/l	0.200		108	85-109			
Matrix Spike (W8G0948-MS1)		**Source: 8070220-03**		Analyzed: 07/28/08						
Phosphorus, Total as P	9.52	1.2	mg/l	5.00	4.60	98	71-118			
Matrix Spike Dup (W8G0948-MSD1)		**Source: 8070220-03**		Analyzed: 07/28/08						
Phosphorus, Total as P	9.42	1.2	mg/l	5.00	4.60	97	71-118	1	20	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8070220
Project ID: Recycled Water Bench Test

Date Received: 07/02/08 09:00
Date Reported: 08/28/08 10:20

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0200 - EPA 500 Series										
Blank (W8G0200-BLK1)				Analyzed: 07/10/08						
Surrogate: 2,3-Dibromopropionic acid	*10.2*		*ug/l*	*10.0*		*102*	*70-130*			
Bromochloroacetic acid (bcaa)	ND	1.0	ug/l							
Dibromoacetic acid (dbaa)	ND	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	2.0	ug/l							
Total HAA5	ND	5.0	ug/l							
Trichloroacetic acid (tcaa)	ND	1.0	ug/l							
LCS (W8G0200-BS1)				Analyzed: 07/10/08						
Surrogate: 2,3-Dibromopropionic acid	*10.7*		*ug/l*	*10.0*		*107*	*70-130*			
Bromochloroacetic acid (bcaa)	9.97	1.0	ug/l	10.0		100	70-130			
Dibromoacetic acid (dbaa)	9.62	1.0	ug/l	10.0		96	70-130			
Dichloroacetic acid (dcaa)	11.0	1.0	ug/l	10.0		110	70-130			
Monobromoacetic acid (mbaa)	8.51	1.0	ug/l	10.0		85	70-130			
Monochloroacetic acid (mcaa)	9.77	2.0	ug/l	10.0		98	70-130			
Trichloroacetic acid (tcaa)	9.28	1.0	ug/l	10.0		93	70-130			
Matrix Spike (W8G0200-MS1)	**Source: 8070220-01**			Analyzed: 07/09/08						
Surrogate: 2,3-Dibromopropionic acid	*11.2*		*ug/l*	*10.0*		*112*	*70-130*			
Bromochloroacetic acid (bcaa)	11.1	1.0	ug/l	10.0	0.926	101	70-130			
Dibromoacetic acid (dbaa)	11.9	1.0	ug/l	10.0	ND	119	70-130			
Dichloroacetic acid (dcaa)	13.3	1.0	ug/l	10.0	1.18	121	70-130			
Monobromoacetic acid (mbaa)	9.93	1.0	ug/l	10.0	ND	99	70-130			
Monochloroacetic acid (mcaa)	3.61	2.0	ug/l	10.0	ND	36	70-130			MS-05
Trichloroacetic acid (tcaa)	10.6	1.0	ug/l	10.0	0.600	100	70-130			
Matrix Spike (W8G0200-MS2)	**Source: 8070501-01**			Analyzed: 07/09/08						
Surrogate: 2,3-Dibromopropionic acid	*12.4*		*ug/l*	*10.0*		*124*	*70-130*			
Bromochloroacetic acid (bcaa)	15.1	1.0	ug/l	10.0	4.37	107	70-130			
Dibromoacetic acid (dbaa)	13.4	1.0	ug/l	10.0	2.90	105	70-130			
Dichloroacetic acid (dcaa)	16.9	1.0	ug/l	10.0	4.87	120	70-130			
Monobromoacetic acid (mbaa)	10.8	1.0	ug/l	10.0	ND	108	70-130			

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0200 - EPA 500 Series										
Matrix Spike (W8G0200-MS2)		**Source: 8070501-01**		Analyzed: 07/09/08						
Monochloroacetic acid (mcaa)	6.90	2.0	ug/l	10.0	ND	69	70-130			MS-05
Trichloroacetic acid (tcaa)	14.5	1.0	ug/l	10.0	4.39	101	70-130			
Matrix Spike Dup (W8G0200-MSD1)		**Source: 8070220-01**		Analyzed: 07/09/08						
Surrogate: 2,3-Dibromopropionic acid	*11.9*		*ug/l*	*10.0*		*119*	*70-130*			
Bromochloroacetic acid (bcaa)	12.1	1.0	ug/l	10.0	0.926	111	70-130	9	30	
Dibromoacetic acid (dbaa)	12.3	1.0	ug/l	10.0	ND	123	70-130	3	30	
Dichloroacetic acid (dcaa)	12.9	1.0	ug/l	10.0	1.18	117	70-130	3	30	
Monobromoacetic acid (mbaa)	9.05	1.0	ug/l	10.0	ND	90	70-130	9	30	
Monochloroacetic acid (mcaa)	3.63	2.0	ug/l	10.0	ND	36	70-130	0.4	30	MS-05
Trichloroacetic acid (tcaa)	11.1	1.0	ug/l	10.0	0.600	105	70-130	4	30	
Matrix Spike Dup (W8G0200-MSD2)		**Source: 8070501-01**		Analyzed: 07/09/08						
Surrogate: 2,3-Dibromopropionic acid	*10.8*		*ug/l*	*10.0*		*108*	*70-130*			
Bromochloroacetic acid (bcaa)	13.8	1.0	ug/l	10.0	4.37	94	70-130	9	30	
Dibromoacetic acid (dbaa)	12.2	1.0	ug/l	10.0	2.90	93	70-130	10	30	
Dichloroacetic acid (dcaa)	15.0	1.0	ug/l	10.0	4.87	101	70-130	12	30	
Monobromoacetic acid (mbaa)	9.60	1.0	ug/l	10.0	ND	96	70-130	11	30	
Monochloroacetic acid (mcaa)	5.73	2.0	ug/l	10.0	ND	57	70-130	18	30	MS-05
Trichloroacetic acid (tcaa)	13.4	1.0	ug/l	10.0	4.39	90	70-130	7	30	

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0092 - EPA 200.2										
Blank (W8G0092-BLK1)				Analyzed: 07/09/08						
Calcium	ND	0.10	mg/l							
Magnesium	ND	0.10	mg/l							
Potassium	ND	0.10	mg/l							
Sodium	ND	0.50	mg/l							
Total Boron	ND	10	ug/l							
LCS (W8G0092-BS1)				Analyzed: 07/09/08						
Calcium	49.7	0.10	mg/l	50.2		99	85-115			
Magnesium	48.5	0.10	mg/l	50.2		97	85-115			
Potassium	52.7	0.10	mg/l	52.0		101	85-115			
Sodium	49.9	0.50	mg/l	50.2		99	85-115			
Total Boron	196	10	ug/l	200		98	85-115			
Matrix Spike (W8G0092-MS1)		**Source: 8070220-01**		Analyzed: 07/09/08						
Calcium	102	0.10	mg/l	50.2	51.6	101	70-130			
Magnesium	79.4	0.10	mg/l	50.2	28.5	101	70-130			
Potassium	72.1	0.10	mg/l	52.0	16.6	107	70-130			
Sodium	195	0.50	mg/l	50.2	144	102	70-130			
Total Boron	666	10	ug/l	200	466	100	70-130			
Matrix Spike (W8G0092-MS2)		**Source: 8070220-02**		Analyzed: 07/09/08						
Calcium	52.7	0.10	mg/l	50.2	ND	105	70-130			
Magnesium	51.5	0.10	mg/l	50.2	ND	103	70-130			
Potassium	56.2	0.10	mg/l	52.0	ND	108	70-130			
Sodium	53.5	0.50	mg/l	50.2	ND	106	70-130			
Total Boron	208	10	ug/l	200	ND	104	70-130			
Matrix Spike Dup (W8G0092-MSD1)		**Source: 8070220-01**		Analyzed: 07/09/08						
Calcium	102	0.10	mg/l	50.2	51.6	100	70-130	0.8	30	
Magnesium	78.9	0.10	mg/l	50.2	28.5	100	70-130	0.6	30	
Potassium	73.0	0.10	mg/l	52.0	16.6	109	70-130	1	30	
Sodium	197	0.50	mg/l	50.2	144	106	70-130	1	30	
Total Boron	668	10	ug/l	200	466	101	70-130	0.3	30	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8070220
Project ID: Recycled Water Bench Test

Date Received: 07/02/08 09:00
Date Reported: 08/28/08 10:20

Metals by EPA 200 Series Methods - Quality Control

Batch W8G0092 - EPA 200.2

Matrix Spike Dup (W8G0092-MSD2) **Source: 8070220-02** Analyzed: 07/09/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Calcium	52.5	0.10	mg/l	50.2	ND	105	70-130	0.4	30	
Magnesium	51.3	0.10	mg/l	50.2	ND	102	70-130	0.4	30	
Potassium	56.3	0.10	mg/l	52.0	ND	108	70-130	0.2	30	
Sodium	52.8	0.50	mg/l	50.2	ND	105	70-130	1	30	
Total Boron	211	10	ug/l	200	ND	106	70-130	2	30	

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Date Received: 07/02/08 09:00
Date Reported: 08/28/08 10:20

Perchlorate by EPA 314.0 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0377 - EPA 314.0, dir. Inj.										
Blank (W8G0377-BLK1)				Analyzed: 07/09/08						
Perchlorate	ND	2.0	ug/l							
LCS (W8G0377-BS1)				Analyzed: 07/09/08						
Perchlorate	17.3	2.0	ug/l	20.0		86	85-115			
Matrix Spike (W8G0377-MS1)		**Source: 8070130-05**		Analyzed: 07/09/08						
Perchlorate	28.9	2.0	ug/l	20.0	8.13	104	80-120			
Matrix Spike Dup (W8G0377-MSD1)		**Source: 8070130-05**		Analyzed: 07/09/08						
Perchlorate	27.1	2.0	ug/l	20.0	8.13	95	80-120	6	15	

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8G0098 - EPA 524.2

Blank (W8G0098-BLK1) Analyzed: 07/02/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	*9.83*		*ug/l*	*10.0*		*98*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.68*		*ug/l*	*10.0*		*97*	*70-130*			
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
1,1-Dichloropropene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3 Dichloropropene (Total)	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	0.50	ug/l							
2-Butanone	ND	5.0	ug/l							
2-Chloroethyl vinyl ether	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
4-Methyl-2-pentanone	ND	5.0	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	0.50	ug/l							
Bromomethane	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0098 - EPA 524.2										
Blank (W8G0098-BLK1)				Analyzed: 07/02/08						
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	0.50	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l							
Di-isopropyl ether	ND	3.0	ug/l							
Ethyl tert-butyl ether	ND	3.0	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Freon 113	ND	5.0	ug/l							
Hexachlorobutadiene	ND	0.50	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
m,p-Xylene	ND	1.0	ug/l							
m-Dichlorobenzene	ND	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	3.0	ug/l							
Methylene chloride	ND	0.50	ug/l							
Naphthalene	ND	0.50	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
o-Dichlorobenzene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
p-Dichlorobenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
Tert-amyl methyl ether	ND	3.0	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							

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Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8070220 Project ID: Recycled Water Bench Test	Date Received: Date Reported:	07/02/08 09:00 08/28/08 10:20

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0098 - EPA 524.2										
Blank (W8G0098-BLK1)				Analyzed: 07/02/08						
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes (total)	ND	0.50	ug/l							
LCS (W8G0098-BS1)				Analyzed: 07/02/08						
Surrogate: 1,2-Dichlorobenzene-d4	*10.1*		*ug/l*	*10.0*		*101*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			
1,1,1,2-Tetrachloroethane	5.86	0.50	ug/l	6.00		98	70-130			
1,1,1-Trichloroethane	6.40	0.50	ug/l	6.00		107	70-130			
1,1,2,2-Tetrachloroethane	5.56	0.50	ug/l	6.00		93	70-130			
1,1,2-Trichloroethane	5.47	0.50	ug/l	6.00		91	70-130			
1,1-Dichloroethane	6.09	0.50	ug/l	6.00		102	70-130			
1,1-Dichloroethene	6.28	0.50	ug/l	6.00		105	70-130			
1,1-Dichloropropene	6.22	0.50	ug/l	6.00		104	70-130			
1,2,3-Trichlorobenzene	5.42	0.50	ug/l	6.00		90	70-130			
1,2,3-Trichloropropane	5.75	0.50	ug/l	6.00		96	70-130			
1,2,4-Trichlorobenzene	5.59	0.50	ug/l	6.00		93	70-130			
1,2,4-Trimethylbenzene	6.28	0.50	ug/l	6.00		105	70-130			
1,2-Dichloroethane	6.00	0.50	ug/l	6.00		100	70-130			
1,2-Dichloropropane	5.87	0.50	ug/l	6.00		98	70-130			
1,3,5-Trimethylbenzene	6.39	0.50	ug/l	6.00		106	70-130			
1,3-Dichloropropane	5.67	0.50	ug/l	6.00		94	70-130			
2,2-Dichloropropane	7.04	0.50	ug/l	6.00		117	70-130			
2-Butanone	5.74	5.0	ug/l	6.00		96	70-130			
2-Chloroethyl vinyl ether	5.06	1.0	ug/l	6.00		84	70-130			
2-Chlorotoluene	6.17	0.50	ug/l	6.00		103	70-130			
2-Hexanone	4.79	4.0	ug/l	6.00		80	70-130			
4-Chlorotoluene	6.06	0.50	ug/l	6.00		101	70-130			
4-Methyl-2-pentanone	5.28	5.0	ug/l	6.00		88	70-130			
Acetone	5.50	5.0	ug/l	6.00		92	70-130			
Benzene	5.98	0.50	ug/l	6.00		100	70-130			

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8G0098 - EPA 524.2

LCS (W8G0098-BS1) Analyzed: 07/02/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Bromobenzene	5.94	0.50	ug/l	6.00		99	70-130			
Bromochloromethane	5.85	0.50	ug/l	6.00		98	70-130			
Bromodichloromethane	5.90	0.50	ug/l	6.00		98	70-130			
Bromoform	5.70	0.50	ug/l	6.00		95	70-130			
Bromomethane	6.05	0.50	ug/l	6.00		101	70-130			
Carbon Disulfide	6.25	0.50	ug/l	6.00		104	70-130			
Carbon tetrachloride	6.55	0.50	ug/l	6.00		109	70-130			
Chlorobenzene	5.92	0.50	ug/l	6.00		99	70-130			
Chloroethane	6.30	0.50	ug/l	6.00		105	70-130			
Chloroform	5.97	0.50	ug/l	6.00		100	70-130			
Chloromethane	6.34	0.50	ug/l	6.00		106	70-130			
cis-1,2-Dichloroethene	5.95	0.50	ug/l	6.00		99	70-130			
cis-1,3-Dichloropropene	5.79	0.50	ug/l	6.00		96	70-130			
Dibromochloromethane	5.68	0.50	ug/l	6.00		95	70-130			
Dibromomethane	5.65	0.50	ug/l	6.00		94	70-130			
Dichlorodifluoromethane (Freon 12)	6.43	0.50	ug/l	6.00		107	70-130			
Di-isopropyl ether	5.74	3.0	ug/l	6.00		96	70-130			
Ethyl tert-butyl ether	5.48	3.0	ug/l	6.00		91	70-130			
Ethylbenzene	6.28	0.50	ug/l	6.00		105	70-130			
Freon 113	6.56	5.0	ug/l	6.00		109	70-130			
Hexachlorobutadiene	6.33	0.50	ug/l	6.00		106	70-130			
Isopropylbenzene	6.33	0.50	ug/l	6.00		106	70-130			
m,p-Xylene	12.6	1.0	ug/l	12.0		105	70-130			
m-Dichlorobenzene	5.86	0.50	ug/l	6.00		98	70-130			
Methyl tert-butyl ether (MTBE)	5.39	3.0	ug/l	6.00		90	70-130			
Methylene chloride	5.68	0.50	ug/l	6.00		95	70-130			
Naphthalene	5.23	0.50	ug/l	6.00		87	70-130			
n-Butylbenzene	6.63	0.50	ug/l	6.00		110	70-130			
n-Propylbenzene	6.33	0.50	ug/l	6.00		106	70-130			
o-Dichlorobenzene	5.70	0.50	ug/l	6.00		95	70-130			
o-Xylene	6.08	0.50	ug/l	6.00		101	70-130			
p-Dichlorobenzene	5.81	0.50	ug/l	6.00		97	70-130			
p-Isopropyltoluene	6.50	0.50	ug/l	6.00		108	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8G0098 - EPA 524.2										
LCS (W8G0098-BS1)				Analyzed: 07/02/08						
sec-Butylbenzene	6.44	0.50	ug/l	6.00		107	70-130			
Styrene	6.12	0.50	ug/l	6.00		102	70-130			
Tert-amyl methyl ether	5.50	3.0	ug/l	6.00		92	70-130			
tert-Butylbenzene	6.41	0.50	ug/l	6.00		107	70-130			
Tetrachloroethene	6.10	0.50	ug/l	6.00		102	70-130			
Toluene	6.04	0.50	ug/l	6.00		101	70-130			
trans-1,2-Dichloroethene	6.14	0.50	ug/l	6.00		102	70-130			
trans-1,3-Dichloropropene	5.78	0.50	ug/l	6.00		96	70-130			
Trichloroethene	6.12	0.50	ug/l	6.00		102	70-130			
Trichlorofluoromethane	6.64	5.0	ug/l	6.00		111	70-130			
Vinyl chloride	6.18	0.50	ug/l	6.00		103	70-130			
LCS Dup (W8G0098-BSD1)				Analyzed: 07/02/08						
Surrogate: 1,2-Dichlorobenzene-d4	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.1*		*ug/l*	*10.0*		*101*	*70-130*			
1,1,1,2-Tetrachloroethane	5.88	0.50	ug/l	6.00		98	70-130	0.3	30	
1,1,1-Trichloroethane	6.39	0.50	ug/l	6.00		106	70-130	0.2	30	
1,1,2,2-Tetrachloroethane	5.70	0.50	ug/l	6.00		95	70-130	2	30	
1,1,2-Trichloroethane	5.60	0.50	ug/l	6.00		93	70-130	2	30	
1,1-Dichloroethane	6.07	0.50	ug/l	6.00		101	70-130	0.3	30	
1,1-Dichloroethene	6.44	0.50	ug/l	6.00		107	70-130	3	30	
1,1-Dichloropropene	6.35	0.50	ug/l	6.00		106	70-130	2	30	
1,2,3-Trichlorobenzene	5.68	0.50	ug/l	6.00		95	70-130	5	30	
1,2,3-Trichloropropane	5.86	0.50	ug/l	6.00		98	70-130	2	30	
1,2,4-Trichlorobenzene	5.72	0.50	ug/l	6.00		95	70-130	2	30	
1,2,4-Trimethylbenzene	6.25	0.50	ug/l	6.00		104	70-130	0.5	30	
1,2-Dichloroethane	5.96	0.50	ug/l	6.00		99	70-130	0.7	30	
1,2-Dichloropropane	5.80	0.50	ug/l	6.00		97	70-130	1	30	
1,3,5-Trimethylbenzene	6.33	0.50	ug/l	6.00		106	70-130	0.9	30	
1,3-Dichloropropane	5.66	0.50	ug/l	6.00		94	70-130	0.2	30	
2,2-Dichloropropane	6.68	0.50	ug/l	6.00		111	70-130	5	30	
2-Butanone	5.66	5.0	ug/l	6.00		94	70-130	1	30	
2-Chloroethyl vinyl ether	5.31	1.0	ug/l	6.00		88	70-130	5	30	

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8G0098 - EPA 524.2

LCS Dup (W8G0098-BSD1) Analyzed: 07/02/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
2-Chlorotoluene	6.14	0.50	ug/l	6.00		102	70-130	0.5	30	
2-Hexanone	5.13	4.0	ug/l	6.00		86	70-130	7	30	
4-Chlorotoluene	6.10	0.50	ug/l	6.00		102	70-130	0.7	30	
4-Methyl-2-pentanone	5.39	5.0	ug/l	6.00		90	70-130	2	30	
Acetone	5.33	5.0	ug/l	6.00		89	70-130	3	30	
Benzene	5.97	0.50	ug/l	6.00		100	70-130	0.2	30	
Bromobenzene	5.95	0.50	ug/l	6.00		99	70-130	0.2	30	
Bromochloromethane	5.59	0.50	ug/l	6.00		93	70-130	5	30	
Bromodichloromethane	5.92	0.50	ug/l	6.00		99	70-130	0.3	30	
Bromoform	5.81	0.50	ug/l	6.00		97	70-130	2	30	
Bromomethane	6.03	0.50	ug/l	6.00		100	70-130	0.3	30	
Carbon Disulfide	5.74	0.50	ug/l	6.00		96	70-130	9	30	
Carbon tetrachloride	6.58	0.50	ug/l	6.00		110	70-130	0.5	30	
Chlorobenzene	5.94	0.50	ug/l	6.00		99	70-130	0.3	30	
Chloroethane	6.30	0.50	ug/l	6.00		105	70-130	0	30	
Chloroform	5.91	0.50	ug/l	6.00		98	70-130	1	30	
Chloromethane	6.28	0.50	ug/l	6.00		105	70-130	1	30	
cis-1,2-Dichloroethene	5.99	0.50	ug/l	6.00		100	70-130	0.7	30	
cis-1,3-Dichloropropene	5.89	0.50	ug/l	6.00		98	70-130	2	30	
Dibromochloromethane	5.69	0.50	ug/l	6.00		95	70-130	0.2	30	
Dibromomethane	5.74	0.50	ug/l	6.00		96	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	6.49	0.50	ug/l	6.00		108	70-130	0.9	30	
Di-isopropyl ether	5.85	3.0	ug/l	6.00		98	70-130	2	30	
Ethyl tert-butyl ether	5.63	3.0	ug/l	6.00		94	70-130	3	30	
Ethylbenzene	6.27	0.50	ug/l	6.00		104	70-130	0.2	30	
Freon 113	6.16	5.0	ug/l	6.00		103	70-130	6	30	
Hexachlorobutadiene	6.42	0.50	ug/l	6.00		107	70-130	1	30	
Isopropylbenzene	6.37	0.50	ug/l	6.00		106	70-130	0.6	30	
m,p-Xylene	12.7	1.0	ug/l	12.0		106	70-130	0.6	30	
m-Dichlorobenzene	5.84	0.50	ug/l	6.00		97	70-130	0.3	30	
Methyl tert-butyl ether (MTBE)	5.50	3.0	ug/l	6.00		92	70-130	2	30	
Methylene chloride	5.72	0.50	ug/l	6.00		95	70-130	0.7	30	
Naphthalene	5.57	0.50	ug/l	6.00		93	70-130	6	30	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8070220
Project ID: Recycled Water Bench Test

Date Received: 07/02/08 09:00
Date Reported: 08/28/08 10:20

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8G0098 - EPA 524.2

LCS Dup (W8G0098-BSD1) Analyzed: 07/02/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
n-Butylbenzene	6.66	0.50	ug/l	6.00		111	70-130	0.5	30	
n-Propylbenzene	6.36	0.50	ug/l	6.00		106	70-130	0.5	30	
o-Dichlorobenzene	5.71	0.50	ug/l	6.00		95	70-130	0.2	30	
o-Xylene	6.11	0.50	ug/l	6.00		102	70-130	0.5	30	
p-Dichlorobenzene	5.83	0.50	ug/l	6.00		97	70-130	0.3	30	
p-Isopropyltoluene	6.49	0.50	ug/l	6.00		108	70-130	0.2	30	
sec-Butylbenzene	6.51	0.50	ug/l	6.00		108	70-130	1	30	
Styrene	6.11	0.50	ug/l	6.00		102	70-130	0.2	30	
Tert-amyl methyl ether	5.59	3.0	ug/l	6.00		93	70-130	2	30	
tert-Butylbenzene	6.41	0.50	ug/l	6.00		107	70-130	0	30	
Tetrachloroethene	6.19	0.50	ug/l	6.00		103	70-130	1	30	
Toluene	6.05	0.50	ug/l	6.00		101	70-130	0.2	30	
trans-1,2-Dichloroethene	6.17	0.50	ug/l	6.00		103	70-130	0.5	30	
trans-1,3-Dichloropropene	5.86	0.50	ug/l	6.00		98	70-130	1	30	
Trichloroethene	6.08	0.50	ug/l	6.00		101	70-130	0.7	30	
Trichlorofluoromethane	6.72	5.0	ug/l	6.00		112	70-130	1	30	
Vinyl chloride	6.30	0.50	ug/l	6.00		105	70-130	2	30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8070220 Project ID: Recycled Water Bench Test	Date Received: Date Reported:	07/02/08 09:00 08/28/08 10:20

Notes and Definitions

MS-05	The spike recovery and/or RPD were outside acceptance limits for the MS and/or MSD due to possible matrix interference. The LCS and/or LCSD were within acceptance limits showing that the laboratory is in control and the data is acceptable.
MS-01	The spike recovery for this QC sample is outside of established control limits possibly due to sample matrix interference.
ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services.

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002.

8070220 1 of 6

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER Susan Stewart (SIGN)

SAMPLERS Vector (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250 mL plastic

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Weck Laboratories

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO₃	HCL		Field Filtered (check)	ANALYSIS REQUESTED Total alkalinity	bicarbonate alk	Boron	calcium	magnesium	Sodium	potassium			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	7/1	10:00	SJ/SC-2 2514 M				C	G	X					X	X								1	14d					
2		↓	↓				F	G	X							X	X	X	X	X									
3		11:00	DI-2 2514 Q				C	G	X					X	X														
4		↓	↓				F	G	X							X	X	X	X	X									
5		10:50	SCRWA-2 2514 O				C	G	X					X	X														
6	↓	↓	↓				F	G	X							X	X	X	X	X			↓	↓					
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On trac Courier	Ice Chest		Susan Stewart	7/1/08			7-2-08	9:00

5.3°

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

8070220

6 250ml glass

2 of 6

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test

PROJECT NUMBER: 27011-07-3200

RECORDER: Susan Stewart (SIGN)

SAMPLERS: Vector (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250ml plastic

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB: Weck Laboratories

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO_3	HCL	H_3PO_4	Field Filtered (check)	ANALYSIS REQUESTED: Sulfate	nitrite	Nitrate	Chloride	Bromide	Total Org. Carbon	[illegible]	DOC		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	7/1	10:00	S1/SC-2 2514M				F	G	X					X	X	X	X	X					1	2d					
2							G					X							X					28d					
3																				[illegible]									
4		↓	↓				G		X												X			28d					
5		10:30	S(RWA-2 2514D				F		X					X	X	X	X	X						2d					
6							G					X							X					28d					
7																				[illegible]									
8		↓	↓				G		X												X			28d					
9		11:00	Di-2 2514Q				F		X					X	X	X	X	X						2d					
10							G					X							X					28d					
11																				[illegible]									
12	↓	↓	↓				G	↓	X												X		↓	28d					
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature) Susan Stewart	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Ontrac courier	Icechest		Susan Stewart	7/1/08				

Send Lab Results to (Name): Norman Wong (Check Office Below)

Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739

☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101

☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ______ TEL ______ FAX ______

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REV. 6/02

8070220

3 of 6

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test

PROJECT NUMBER 27011-07-3200

RECORDER Susan Stewart (SIGN)

SAMPLERS Vector (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Weck Laboratories

LABORATORY USE ONLY

LAB PROJECT NO.

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO3	HCL		Field Filtered (check)	ANALYSIS REQUESTED Bromodichloromethane	Bromoform	Chloroform	Carbon tetrachloride	Dibromochloromethane	Xylenes, Total	Full 8010 list VOC			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
2ea	1	7/1	10:10	S1/SC-2 2514M				A	G	X					X	X	X	X	X	X	X			1	14day					
	2	↓	↓	↓				A	G	X					X	X	X	X	X	X	X			1	↓					
2ea	3		10:30	SCKWA-2 2514 O				A	G	X					X	X	X	X	X	X	X			1						
	4			↓				A	G	X					X	X	X	X	X	X	X			1						
2ea	5		11:00	DI-2 2514 Q				A	H	X					X	X	X	X	X	X	X			1						
	6	↓						A	H	X					X	X	X	X	X	X	X			1	↓					
	7																													
	8																													
	9																													
	10																													
	11																													
	12																													
	13																													
	14																													
	15																													
	16																													

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature) Susan Stewart	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Icechest		Susan Stewart	7/1/08				

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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REV. 6/02

8070220

6 250 ml Glass

4 of 6

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

PROJECT NAME: Recycled Water Bench Test
PROJECT NUMBER: 27011-07-3200
RECORDER: Susan Stewart (SIGN)
SAMPLERS: Vector (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other: 250ml plastic

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB: Weck Lab

LABORATORY USE ONLY

LAB PROJECT NO.

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED Acid															LABORATORY USE ONLY		
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	NH_4Cl	Field Filtered (check)	Bromochloroacetic	Dibromoacetic Acid	Dichloroacetic Acid	monobromoacetic Acid	monochloroacetic Acid	Trichloroacetic Acid	Perchlorate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	7/1	10:00	SJ/SC-2 2514 M				G	G				X	X	X	X	X	X	X	X				1	14day					
2	↓	10:30	SCRWA-2 2514 O				G	↓				X	X	X	X	X	X	X	X				1	"					
3		11:00	DI-2 2514 Q				G					X	X	X	X	X	X	X	X				1	"					
4		10:00	SJ/SC-2 2514 M				F		X				X							X			1	28days					
5		10:30	SCRWA-2 2514 O				F		X				X							X			1						
6	↓	11:00	DI-2 2514 Q				F	↓	X				X							X			1	↓					
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
On Trac Courier	Ice chest		Susan Stewart 7/1/08					

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ____________ TEL ________ FAX ________

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

8070220 5 of 6

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER Susan Stewart (SIGN)
SAMPLERS Vector (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250 mL plastic

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Week Laboratories

LABORATORY USE ONLY
LAB PROJECT NO. ______

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED													LABORATORY USE ONLY		
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	Total Phosphate									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	7/1	9:00	SJ/SC-C 2514C				F	G				X		X									1	28d					
2		13:30	↓ ↓				F	G				X		X															
3		9:00	SJ/SC-D 2514D				F	G				X		X															
4		13:30	↓ ↓				F	G				X		X															
5		9:00	SCRWA-B 2514F				F	G				X		X															
6		15:30	↓ ↓				F	G				X		X															
7		9:00	SCRWA-C 2514G				F	G				X		X															
8		13:30	↓ ↓				F	G				X		X															
9		9:00	SCRWA-D 2514H				F	G				X		X															
10		13:30	↓ ↓				F	G				X		X															
11		9:00	DI-C 2514K				F	H				X		X															
12	↓	13:30	↓ ↓				F	H				X		X															
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time		
Relinquished By: (Signature)	Received By: (Signature)	Date	Time		
Relinquished By: (Signature)	Received By: (Signature)	Date	Time		

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Ontrac Courier	Icechest		Susan Stewart	7/1/08				

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

8070220

6 of 6

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water Bench Test
PROJECT NUMBER 27011-07-3200
RECORDER Susan Stewart (SIGN)

SAMPLERS Vector (PRINT)
Susan Stewart (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other 250ml plastic

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Laboratories

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE			Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION				Field Filtered (check)	ANALYSIS REQUESTED		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
				TEMP °C	COND micromhos/cm	pH			Unpreserved	HNO_3	HCL	NaOH		Cyanide	Total Phosphate							
1	7/1	10:00	SJ/SC-2 2514M				C	G				X	x	X		1	14day					
2		10:30	SCRWA2 2514 O				C	G				X	x	X		1						
3		11:00	DI-2 2514Q				C	G				X	x	X		1						
4		9:00	SJ/SC-1 2514 L				F	G							X	1	28d					
5		10:00	SJ/SC-2 2514 M				F	G							X	1						
6		9:00	DI-1 2514 P				F	H							X	1						
7		11:00	DI-2 2514 Q				F	H							X	1						
8		9:00	SCRWA-1 2514 N				F	G							X	1						
9		10:30	SCRWA-2 2514 O				F	G							X	1						
10																						
11																						
12																						
13																						
14																						
15																						
16																						

NOTES / MISCELLANEOUS

Sampled by Vector Engineering

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
OnTrac Courier	Ice chest		Susan Stewart	7/1/08				

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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FIGURES

FIGURE II-2-1A
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN SAND
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

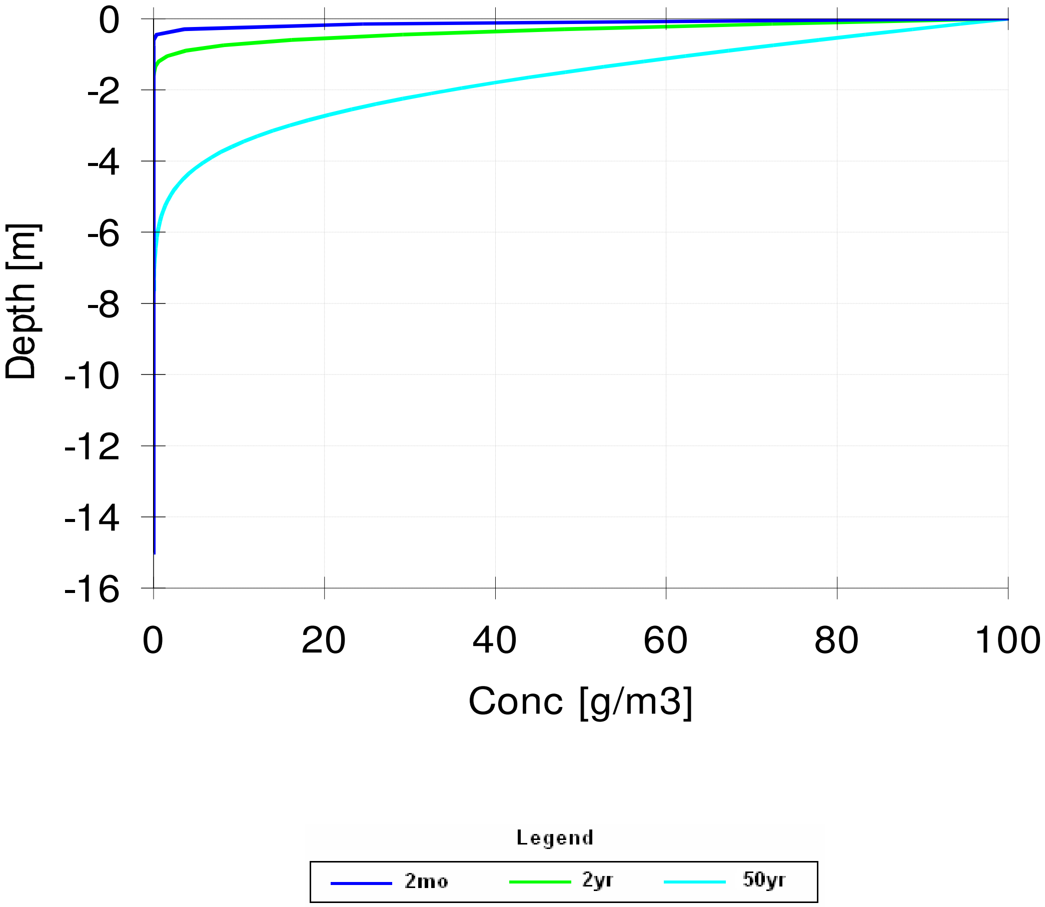


FIGURE II-2-1B
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN SILT
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

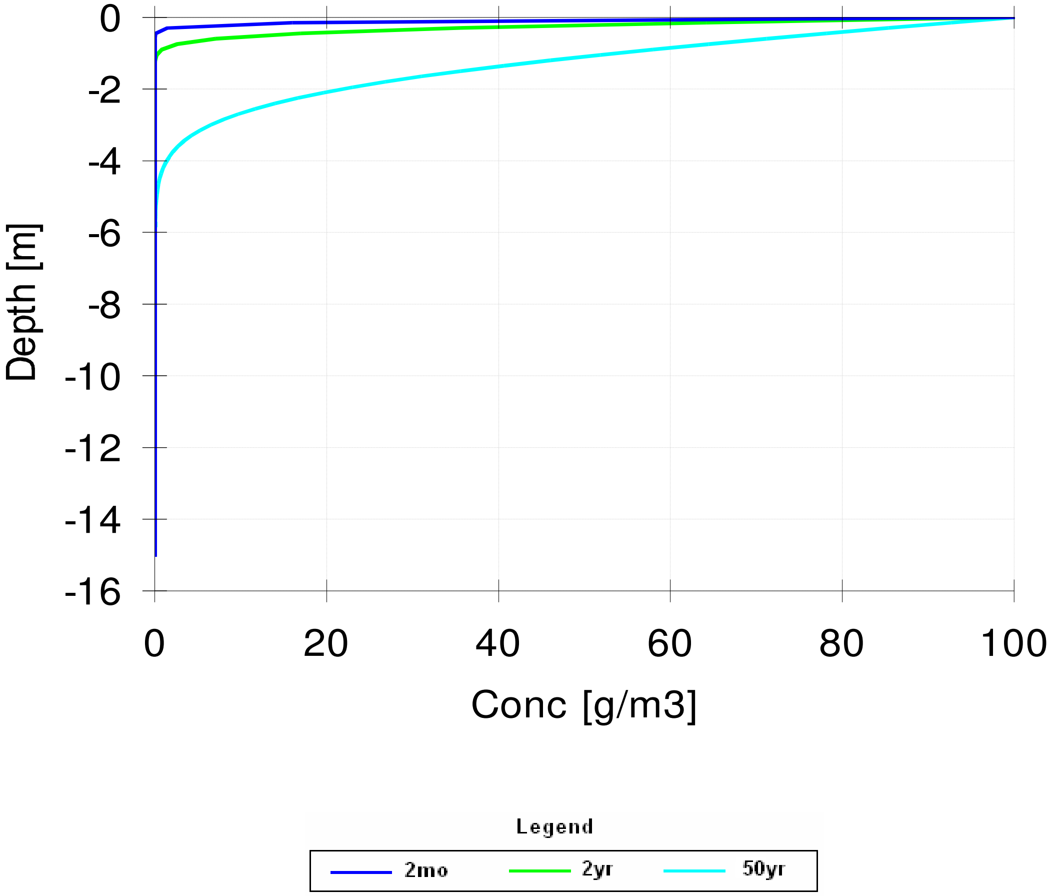


FIGURE II-2-1C
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN CLAY
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

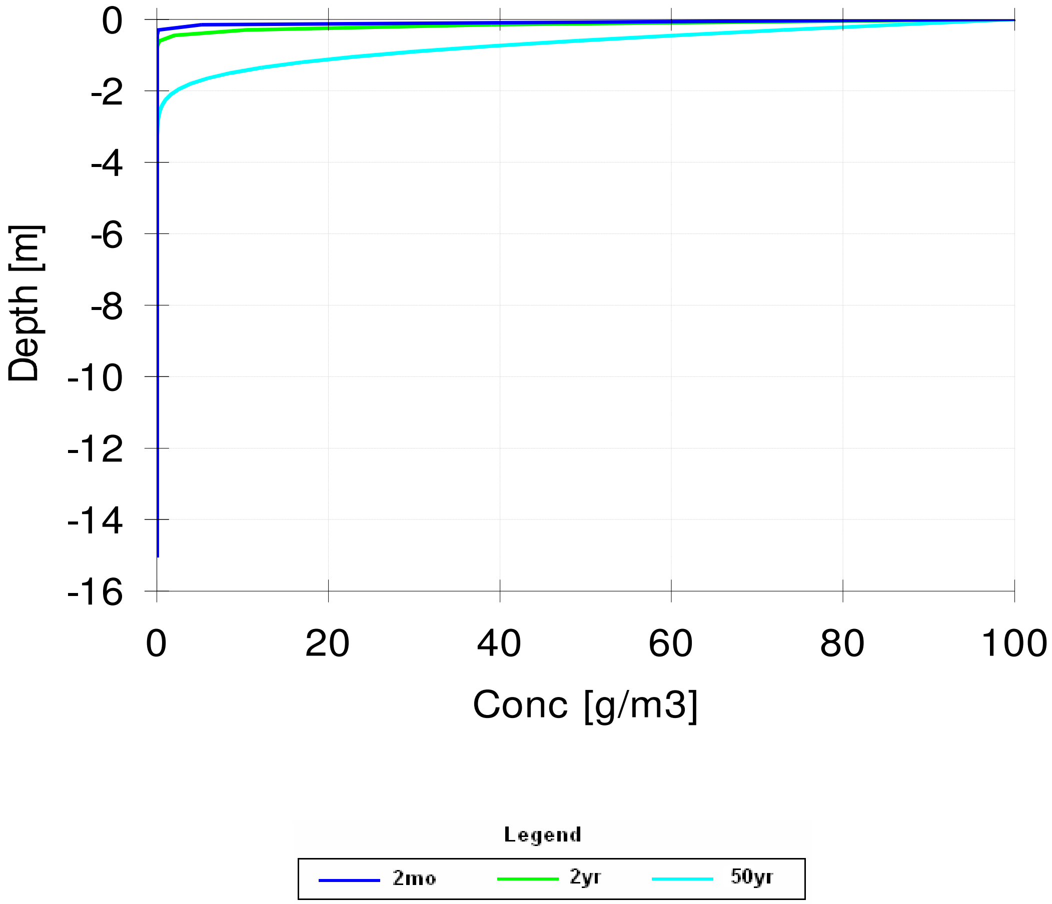


FIGURE II-2-2A
CONCENTRATION CURVE: CHLOROFORM IN SAND
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

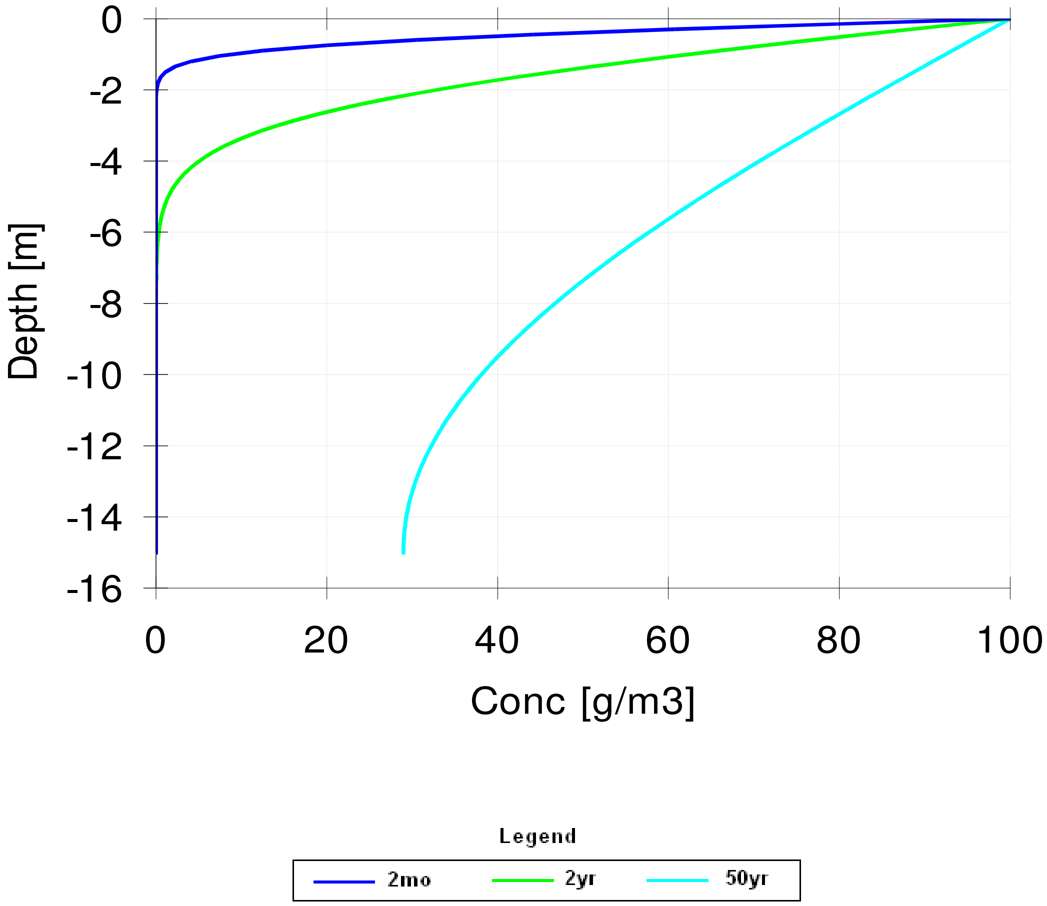


FIGURE II-2-2B
CONCENTRATION CURVE: CHLOROFORM IN SILT
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

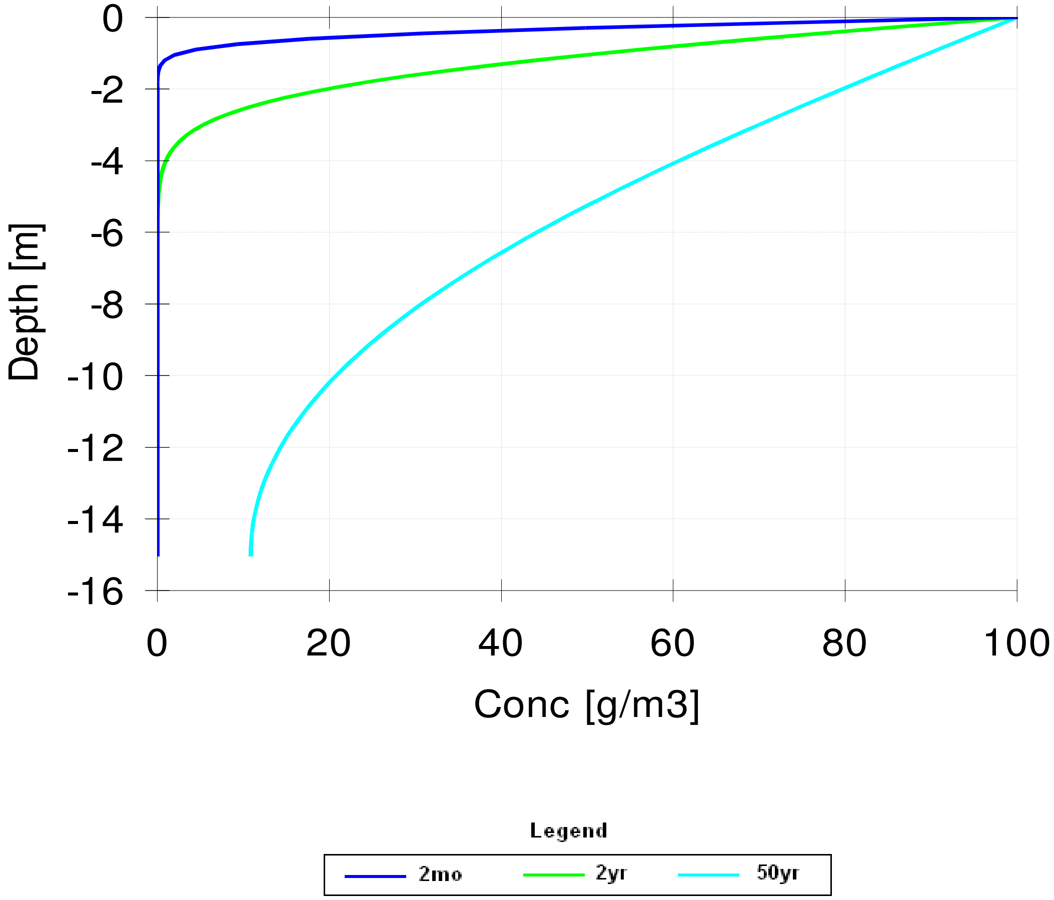


FIGURE II-2-2C
CONCENTRATION CURVE: CHLOROFORM IN CLAY
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

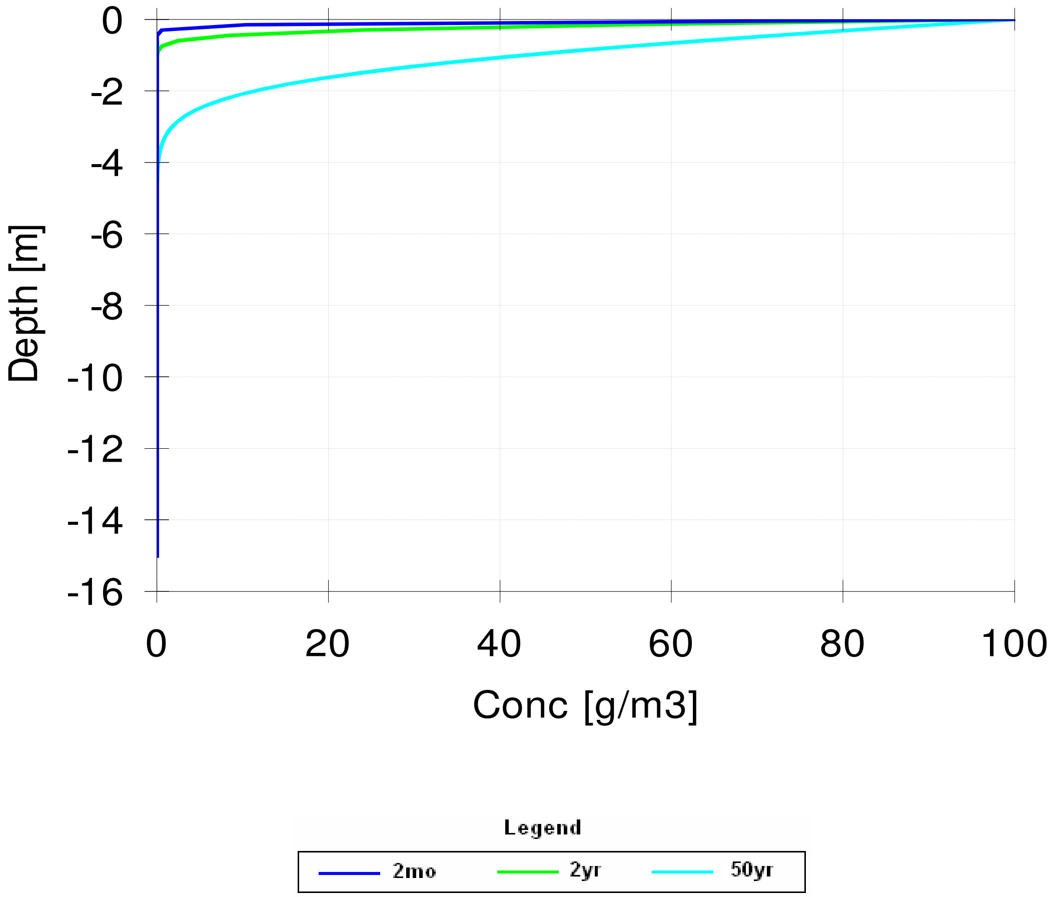


FIGURE II-2-3A
CONCENTRATION CURVE: M-XYLENE IN SAND
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

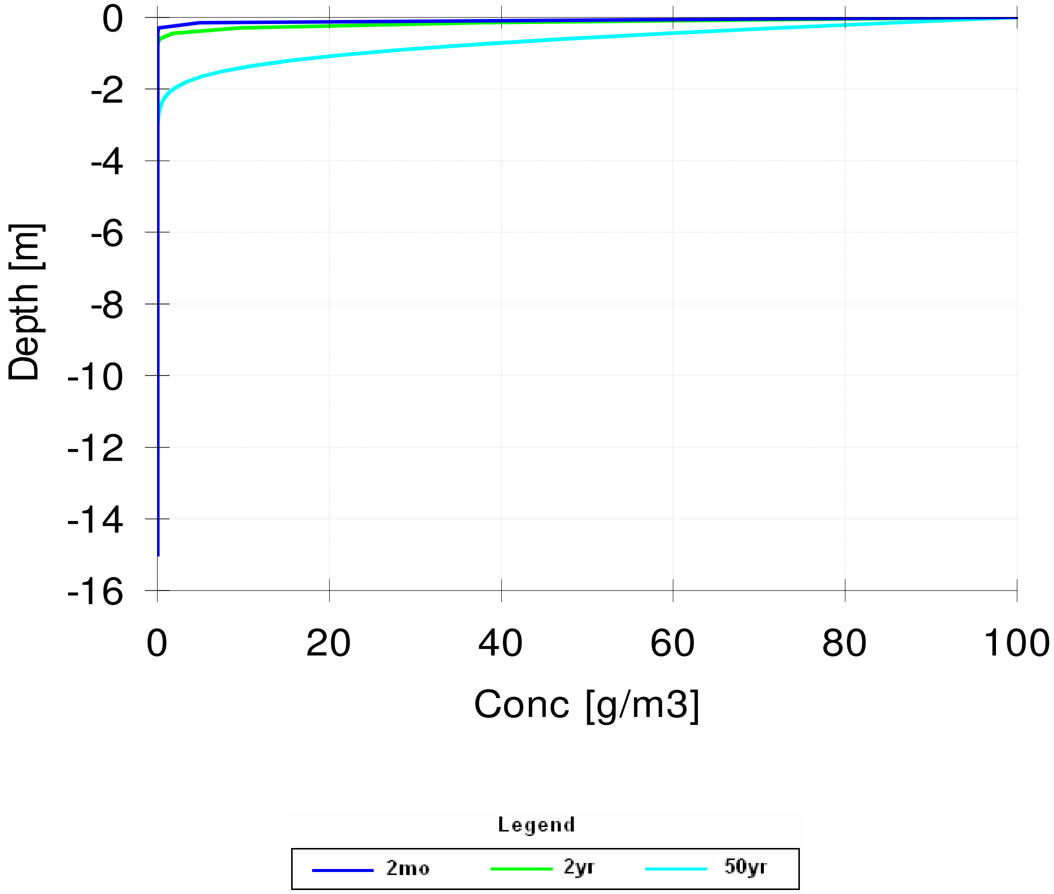


FIGURE II-2-3B
CONCENTRATION CURVE: M-XYLENE IN SILT
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

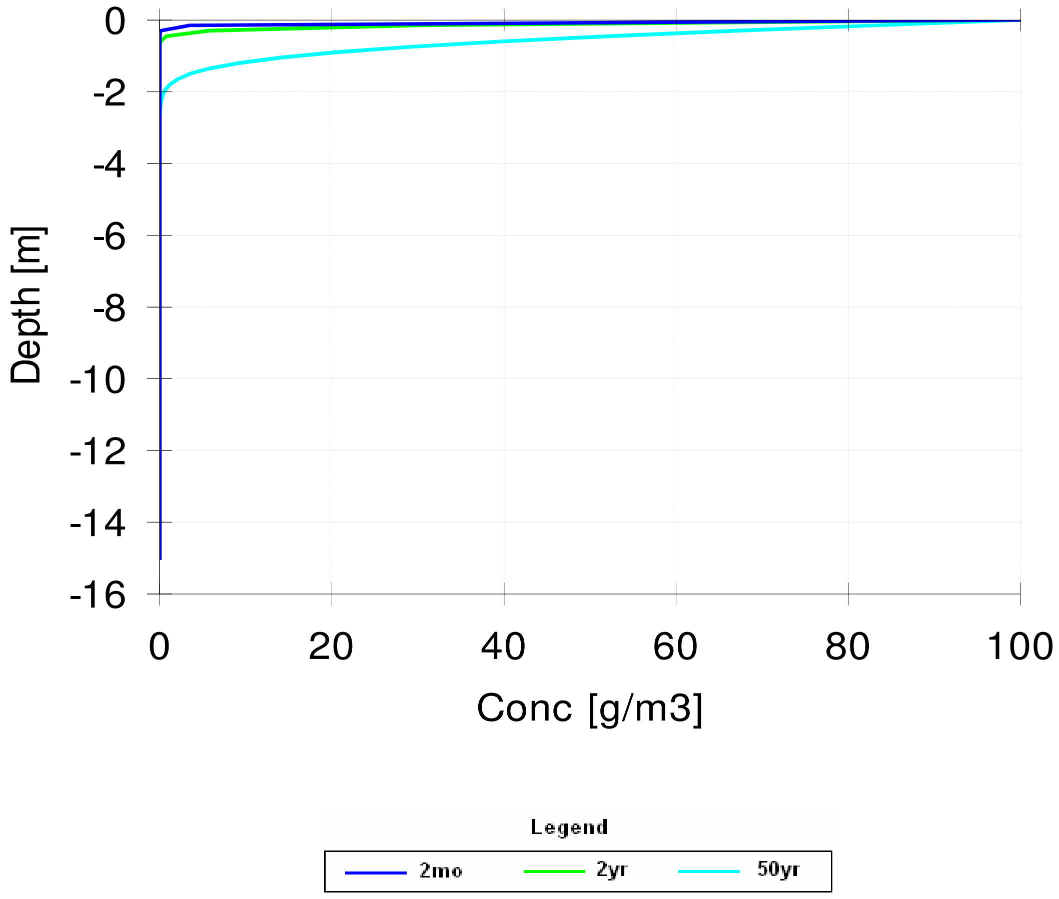


FIGURE II-2-3C
CONCENTRATION CURVE: M-XYLENE IN CLAY
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

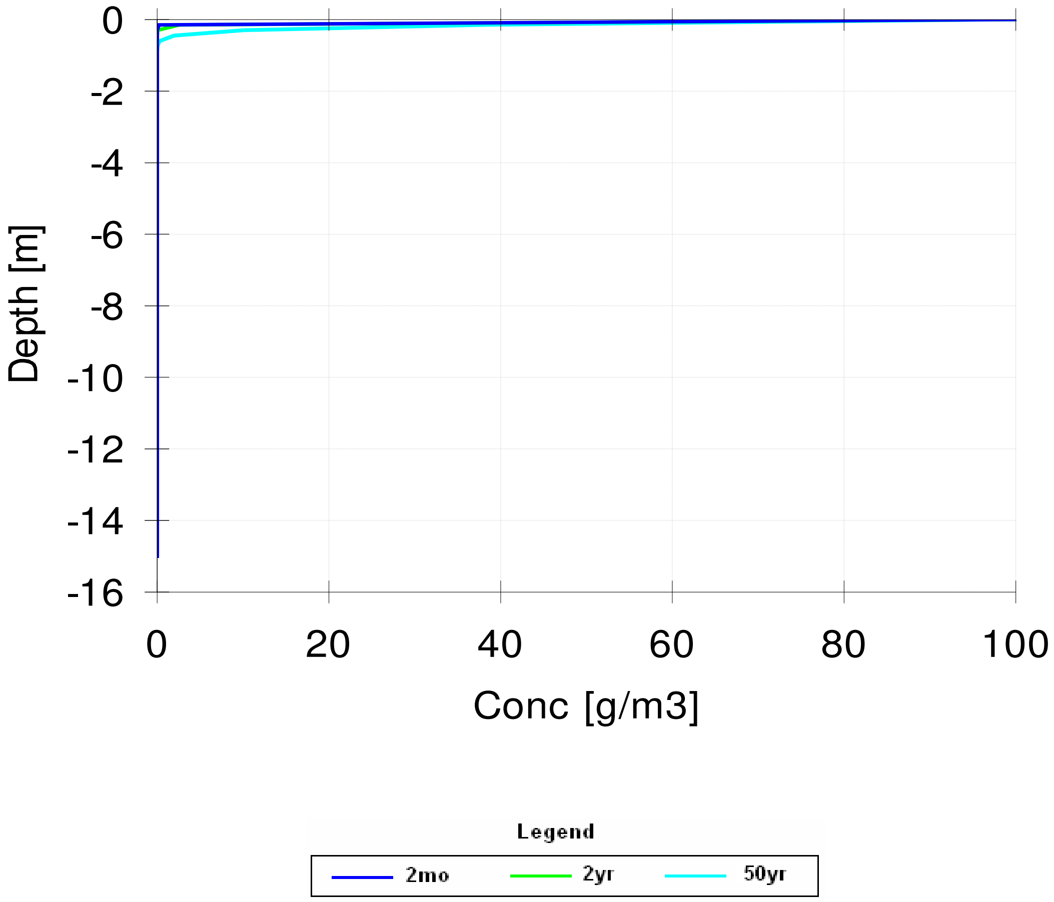


FIGURE II-2-4A
CONCENTRATION CURVE: NDMA IN SAND
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

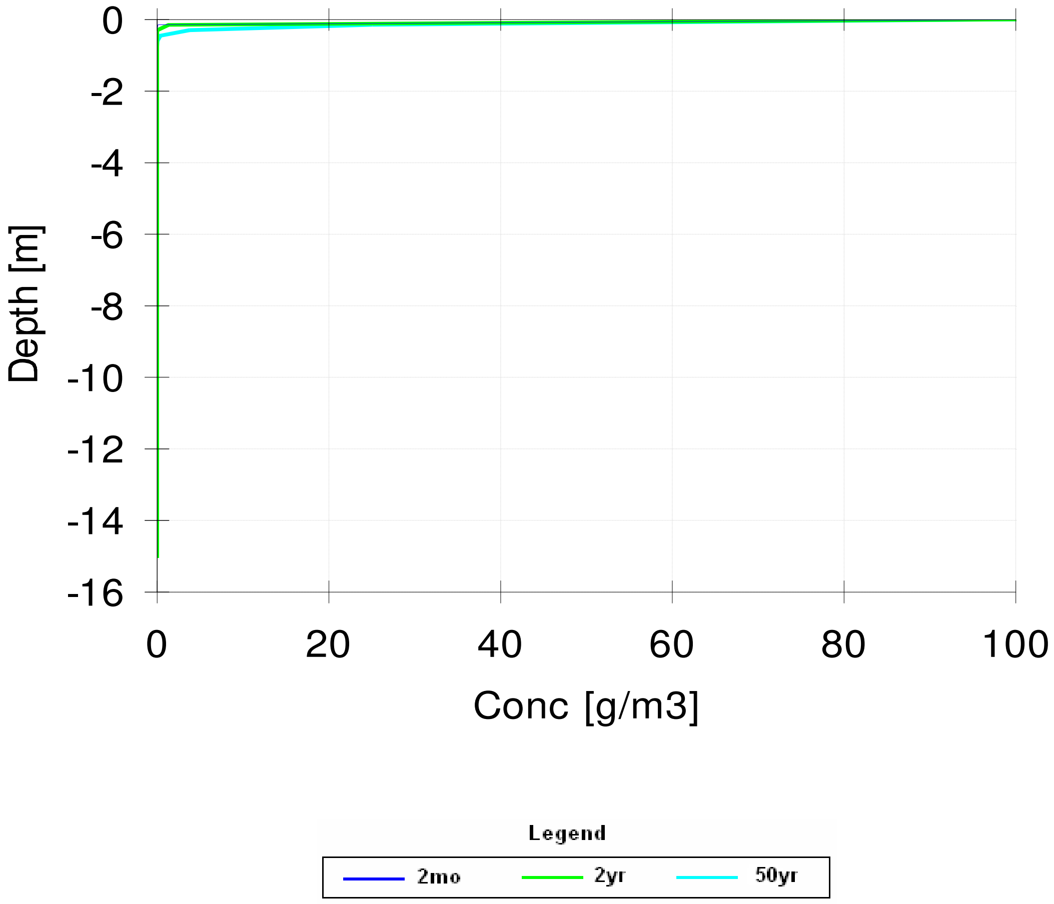


FIGURE II-2-4B
CONCENTRATION CURVE: NDMA IN SILT
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

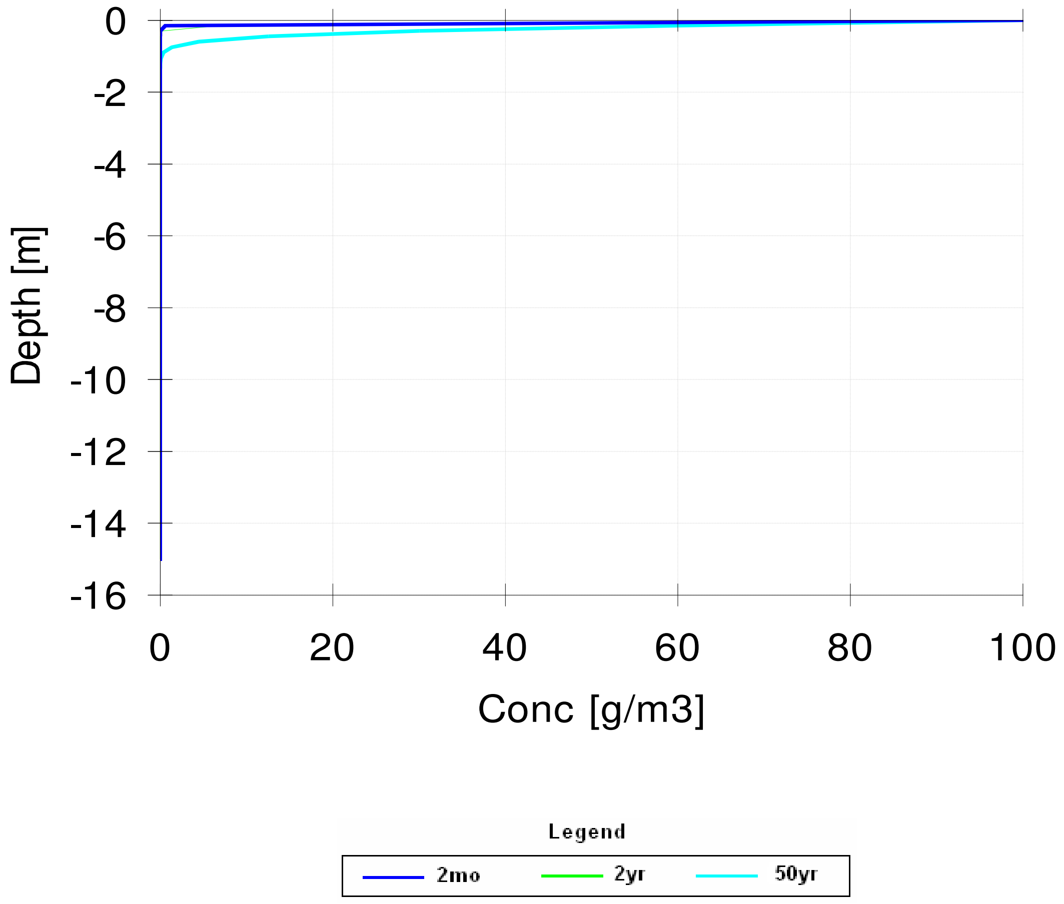


FIGURE II-2-4C
CONCENTRATION CURVE: NDMA IN CLAY
2 MONTH, 2 YEARS, 50 YEARS
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

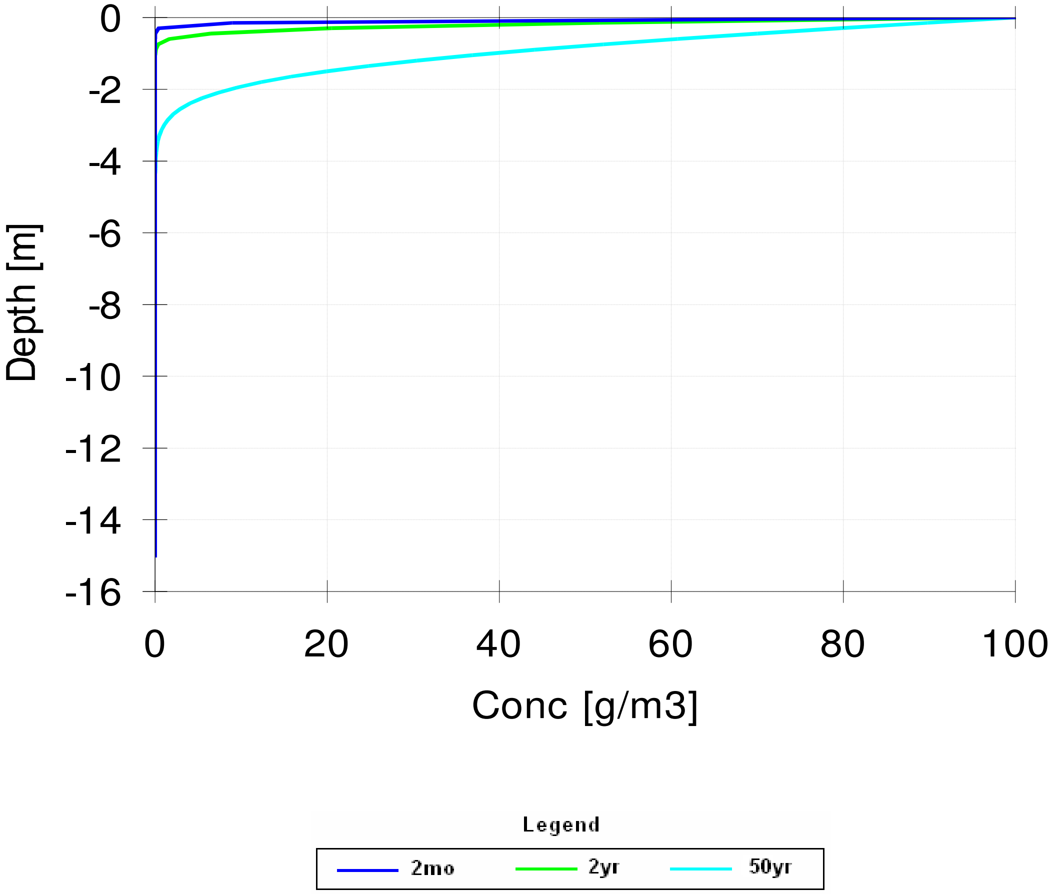
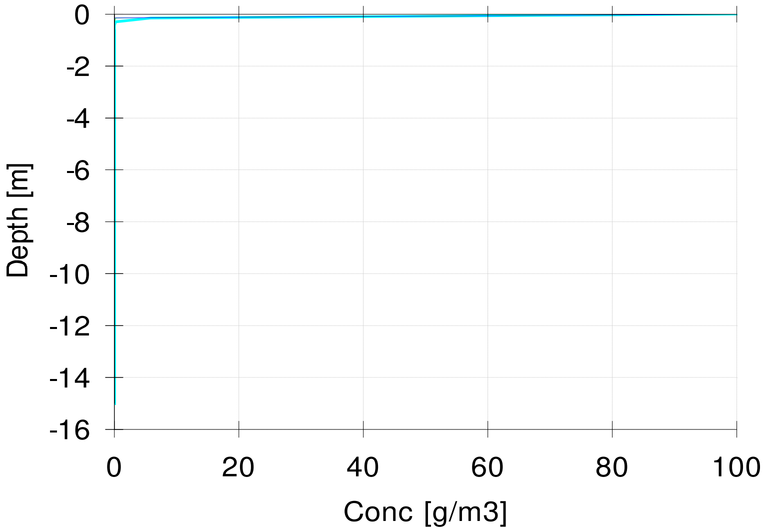


FIGURE II-2-5
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN SAND
SENSITIVITY OF HENRYS CONSTANT
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

LOW RANGE



HIGH RANGE

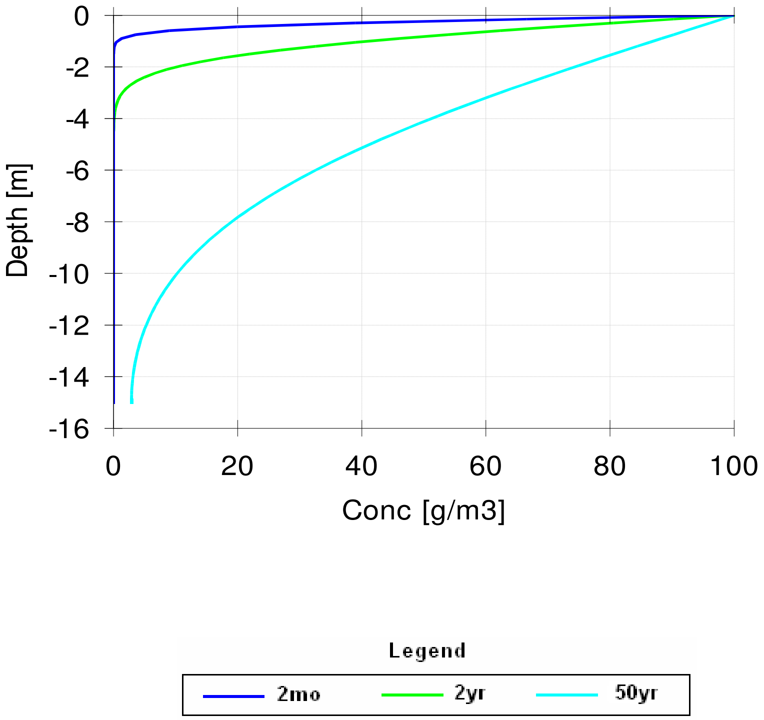
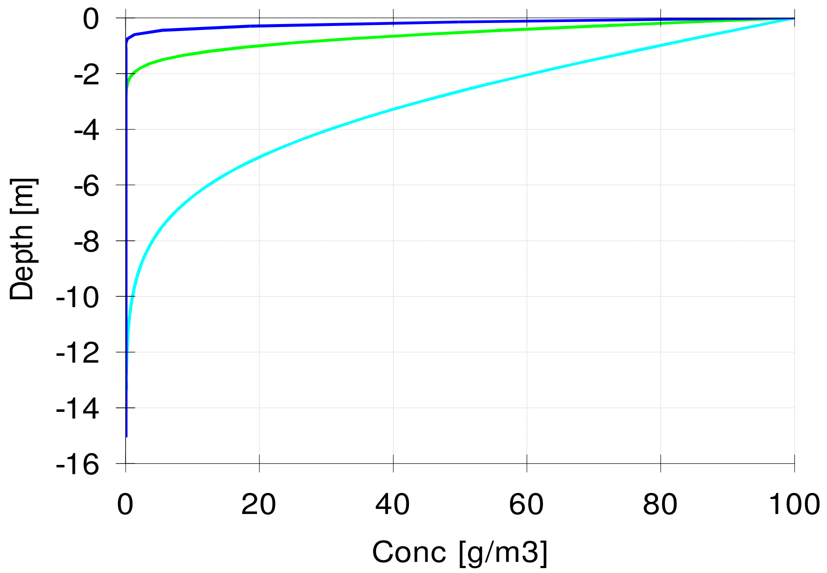


FIGURE II-2-6
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN SAND
SENSITIVITY OF ADSORPTION ISOTHERM, Kd
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

LOW RANGE



HIGH RANGE

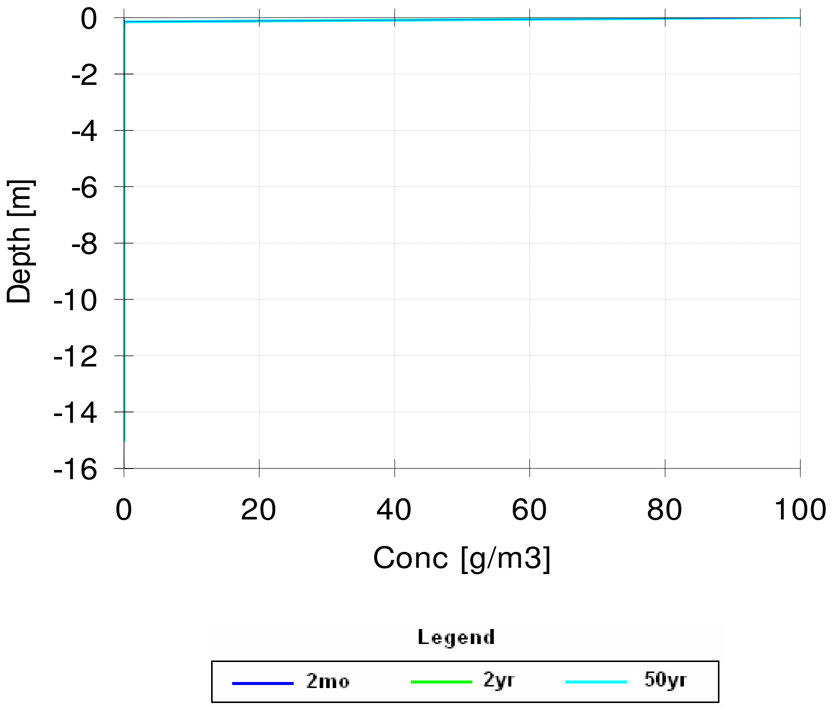


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FIGURE II-2-7A
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN SAND
SENSITIVITY OF MODEL: MODIFIED VAN GUNECHTEN WATER TRANSPORT MODEL
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

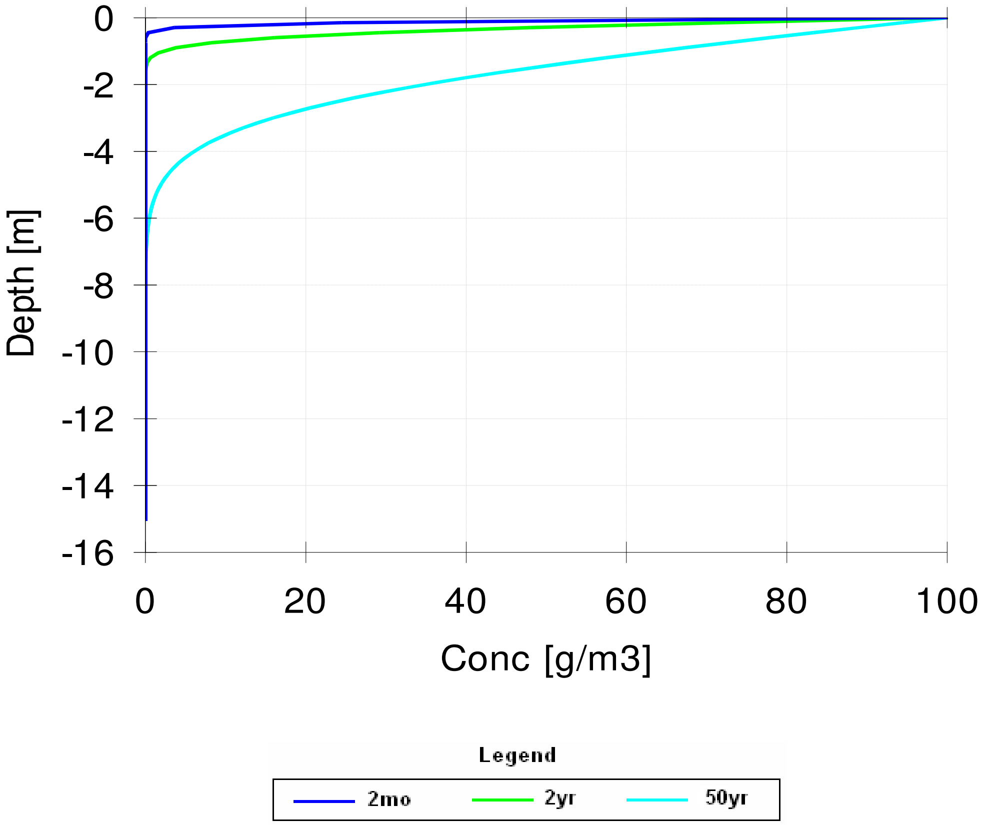


FIGURE II-2-7B
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN SAND
SENSITIVITY OF MODEL: BROOKS COREY (1964) WATER TRANSPORT MODEL
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

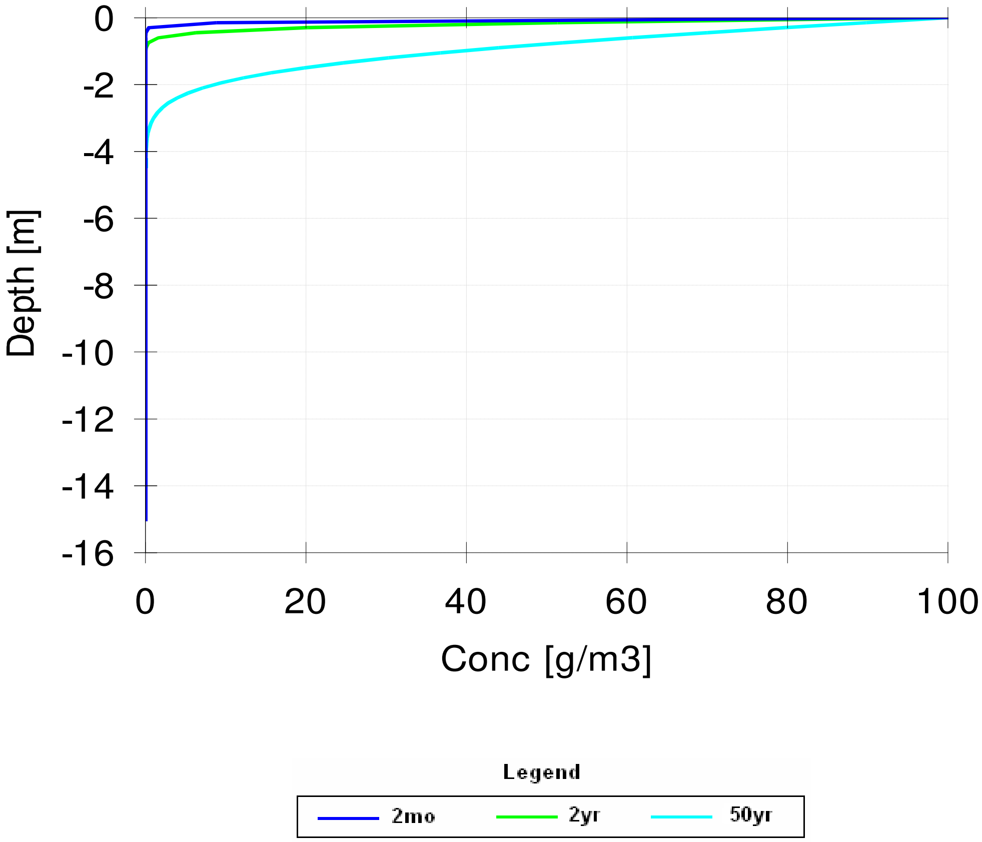


FIGURE II-2-7C
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN SAND
SENSITIVITY OF MODEL: KOSUGI (1996) WATER TRANSPORT MODEL
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

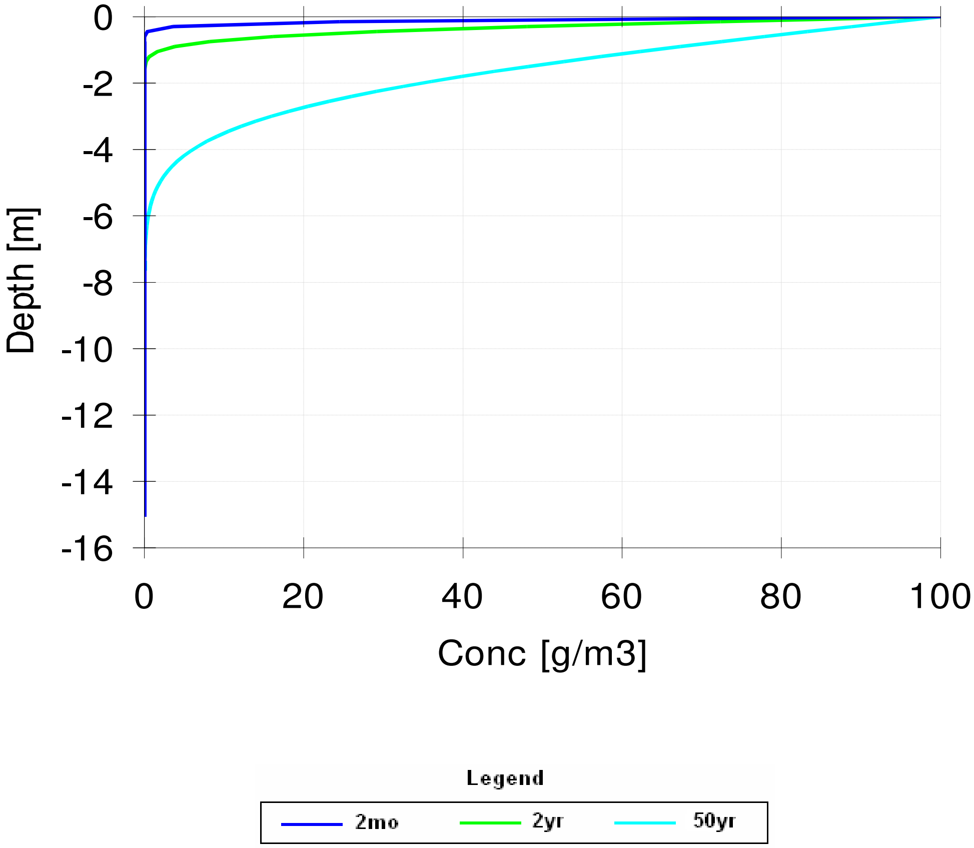
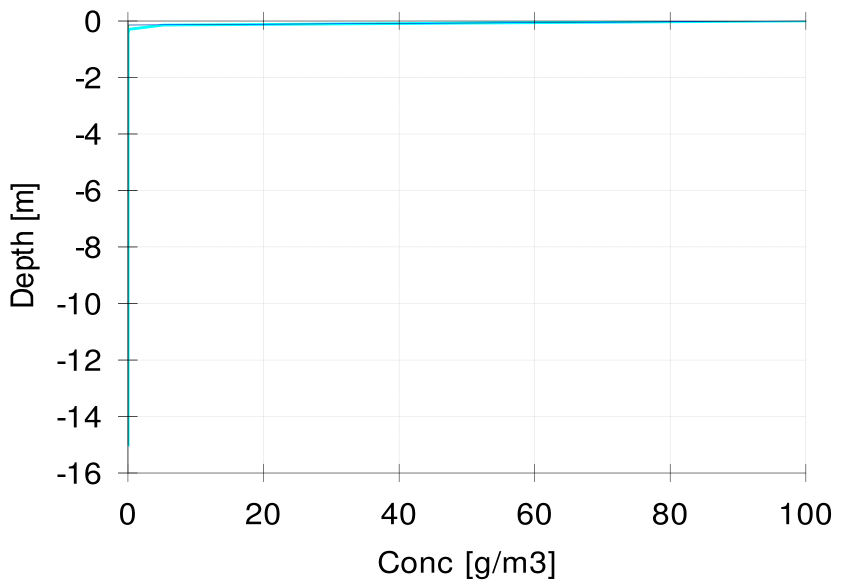


FIGURE II-2-8
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN SAND
SENSITIVITY OF MOLECULAR DIFFUSION IN AIR
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

LOW RANGE



HIGH RANGE

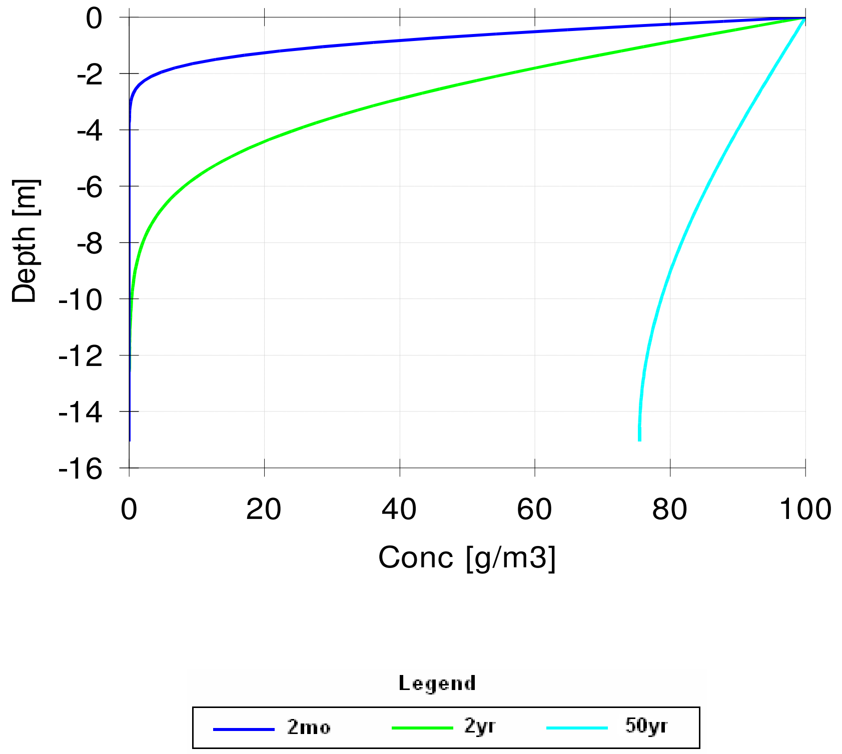
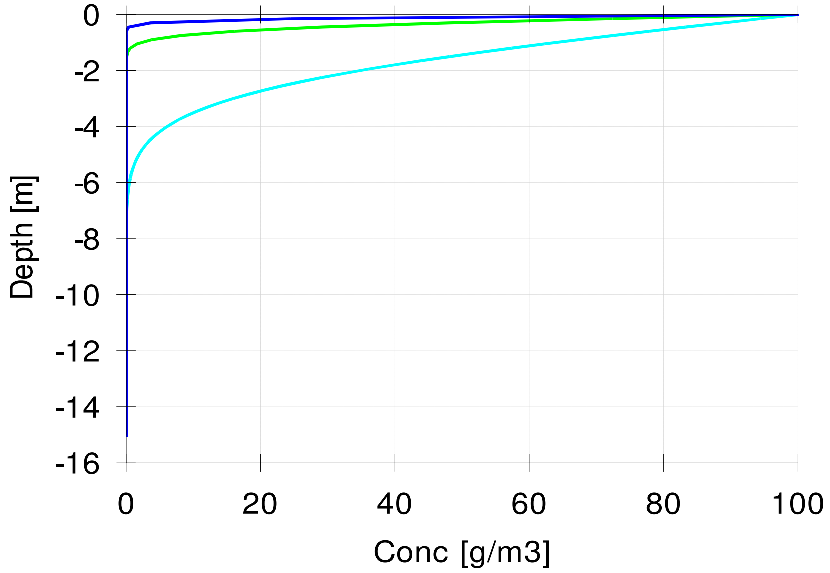


FIGURE II-2-9
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN SAND
SENSITIVITY OF MOLECULAR DIFFUSION IN WATER
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

LOW RANGE



HIGH RANGE

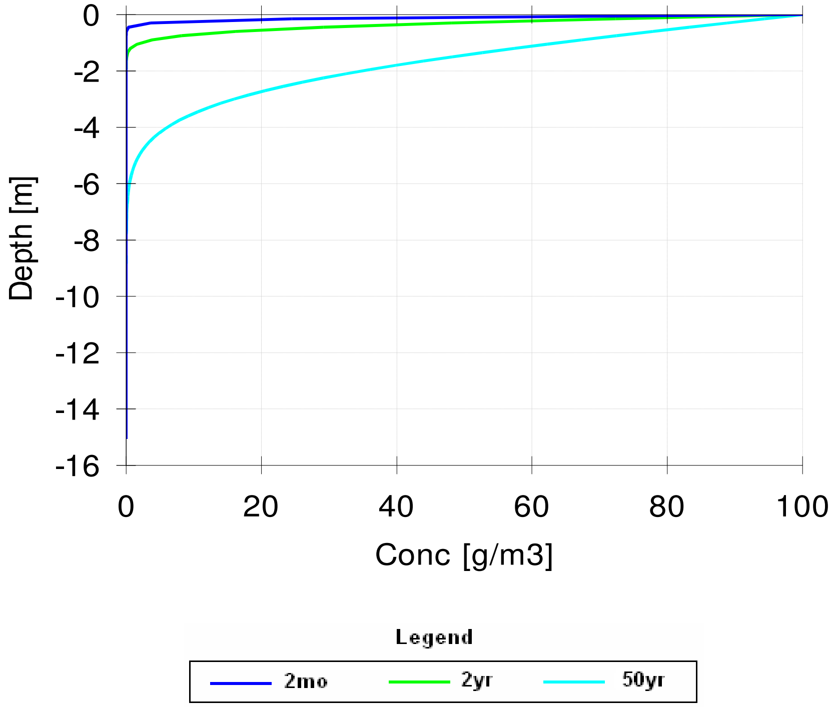
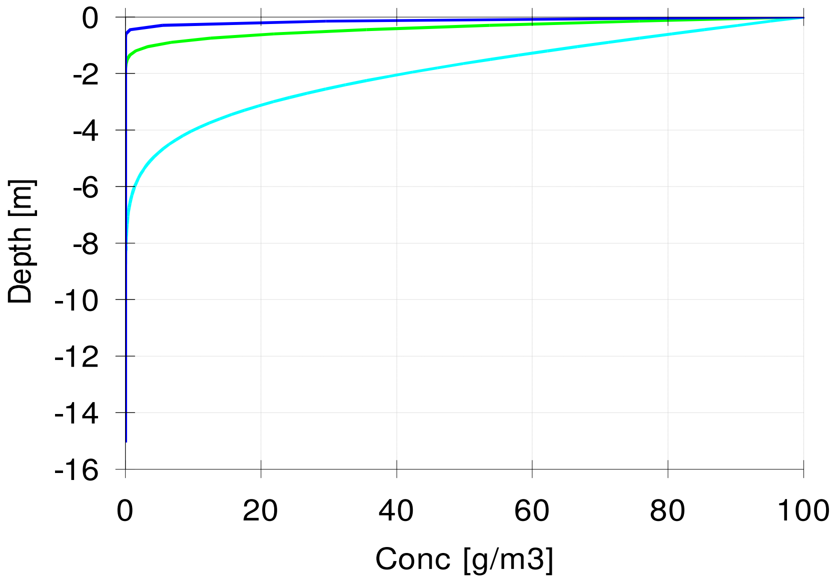


FIGURE II-2-10
CONCENTRATION CURVE: BROMODICHLOROMETHANE IN SAND
SENSITIVITY OF BULK DENSITY
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

LOW RANGE



HIGH RANGE

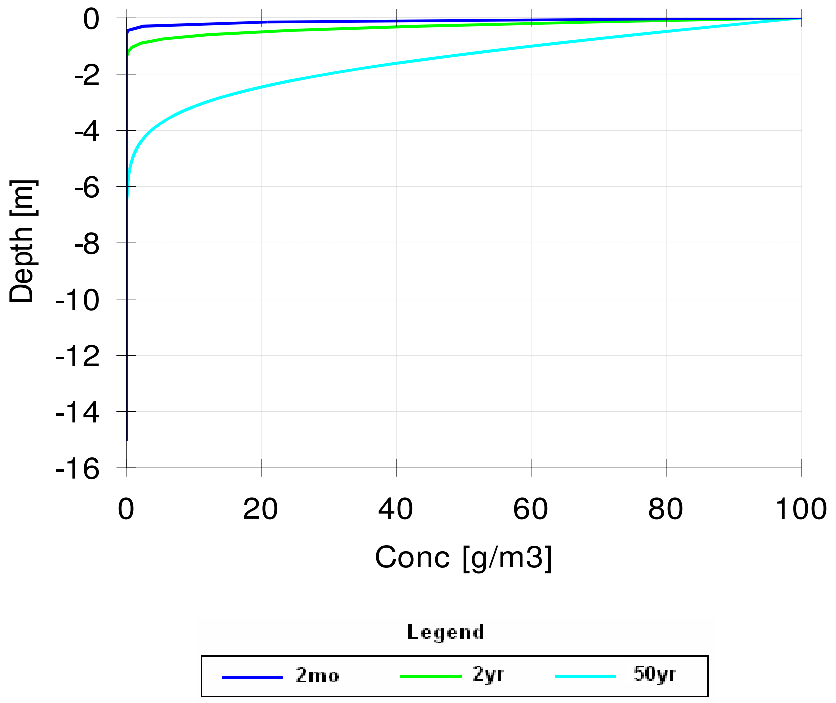


FIGURE II-2-11
CONCENTRATION CURVE: BROMODICHLOROMETHANE
SENSITIVITY TO HETEROGENEITY OF SOIL PROFILE
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

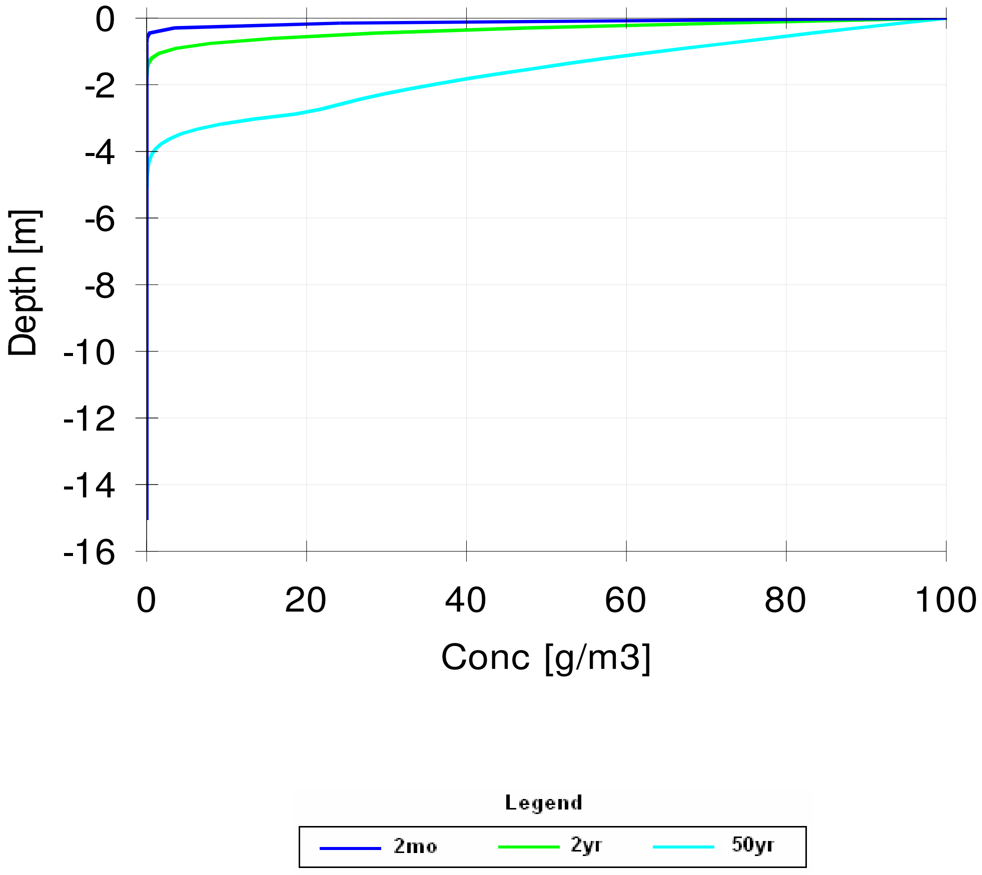


FIGURE II-3-1
BENCH TEST DRILLING LOCATIONS
SANTA CLARA VALLEY GROUNDWATER SUBBASIN

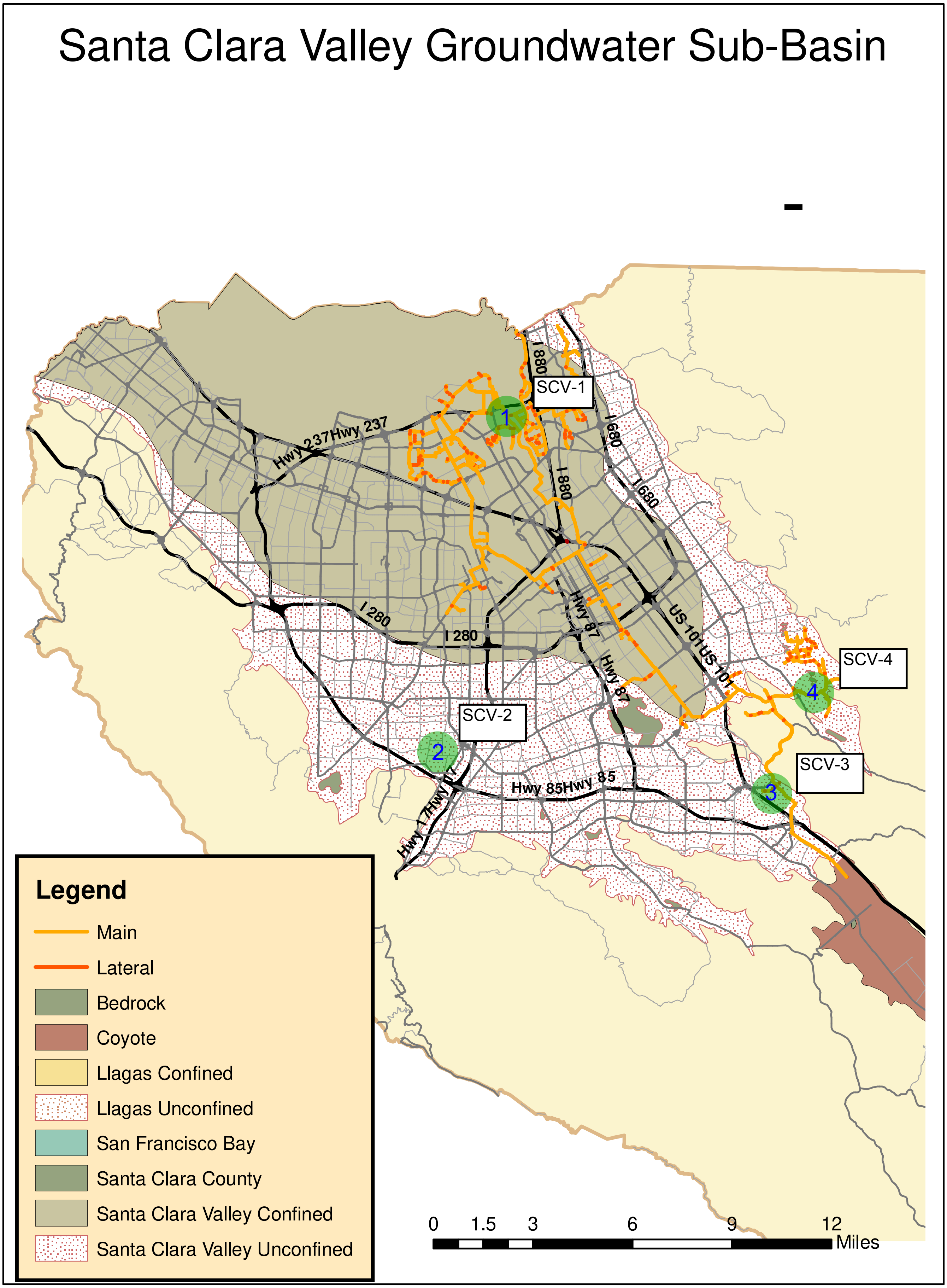
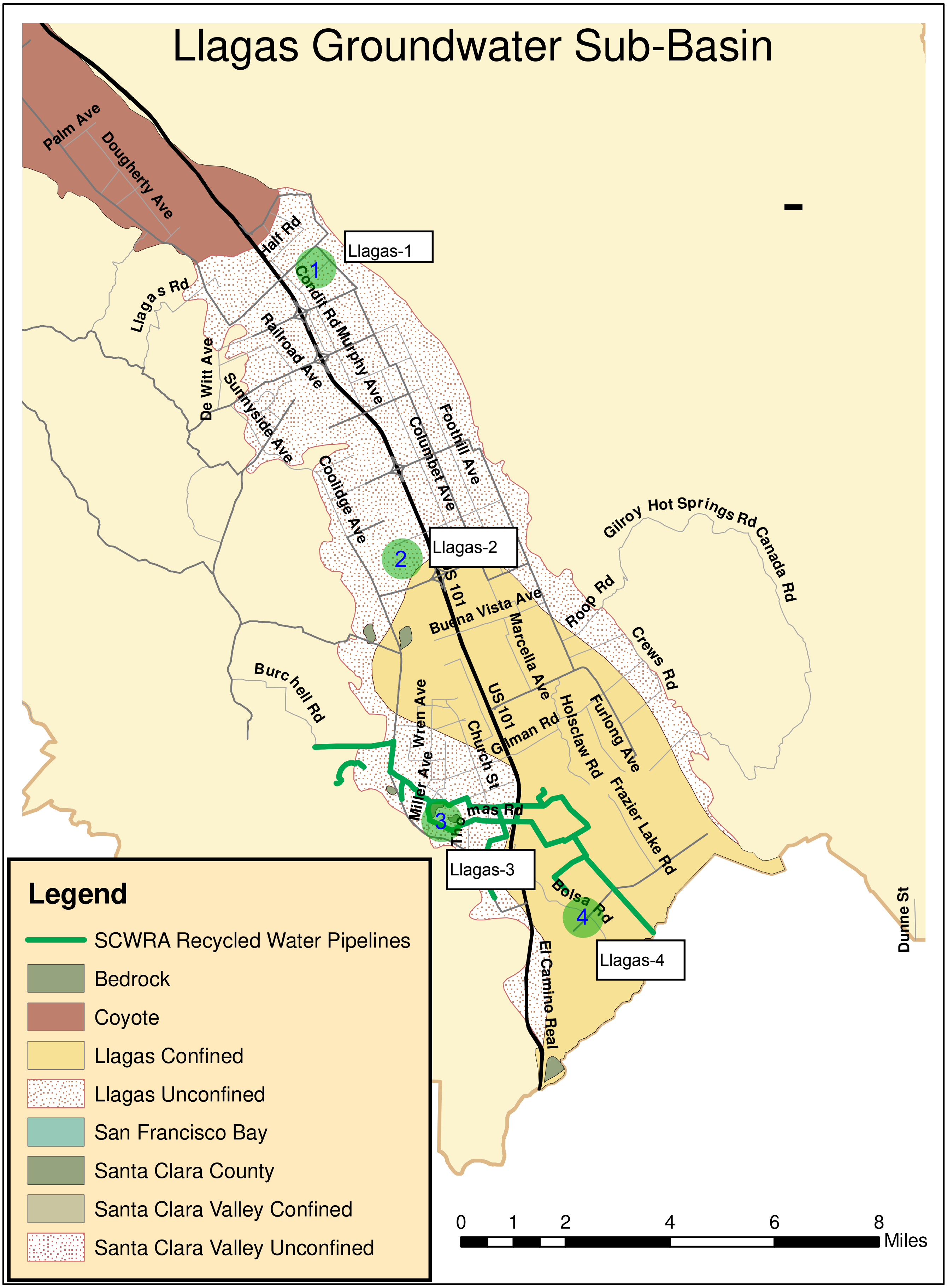


FIGURE II-3-2
BENCH TEST DRILLING LOCATIONS
LLAGAS GROUNDWATER SUBBASIN



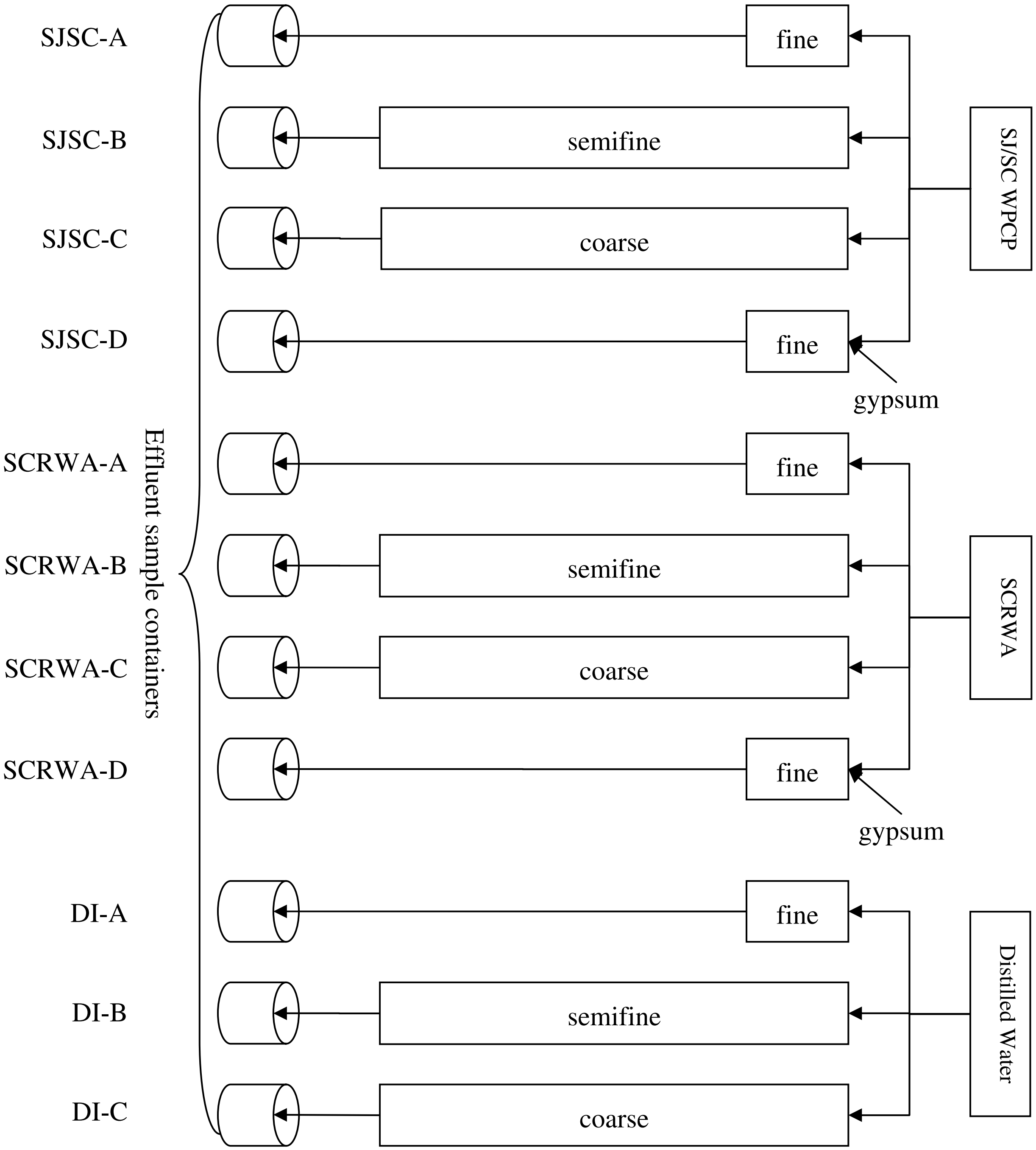


Figure II-3-3
Recycled Water Bench Test Flow Diagram

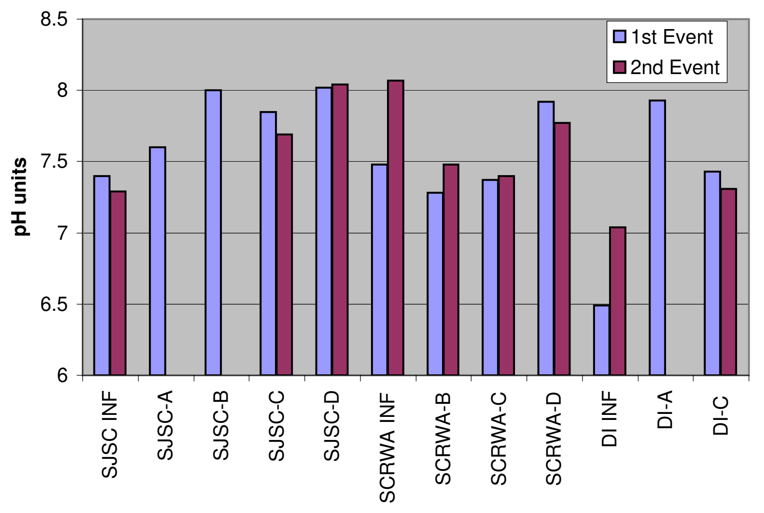


Figure II-3-4 pH

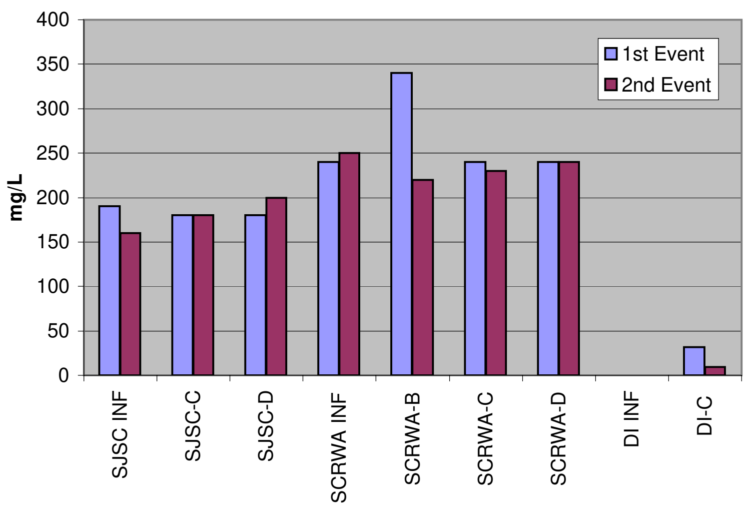


Figure II-3-5 Alkalinity as CaCO3

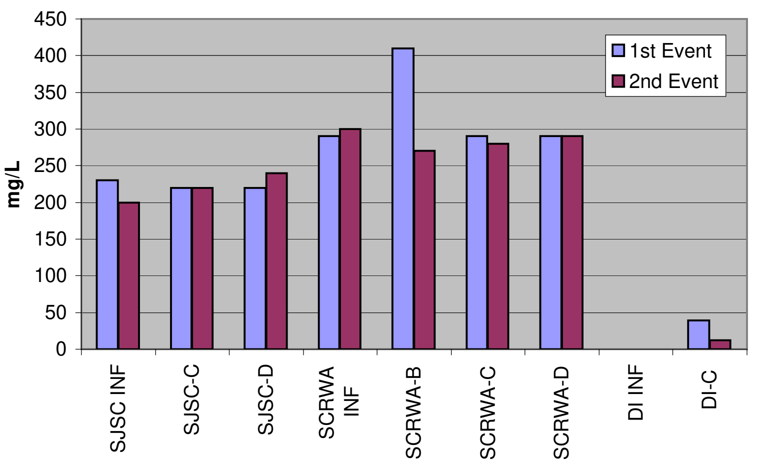
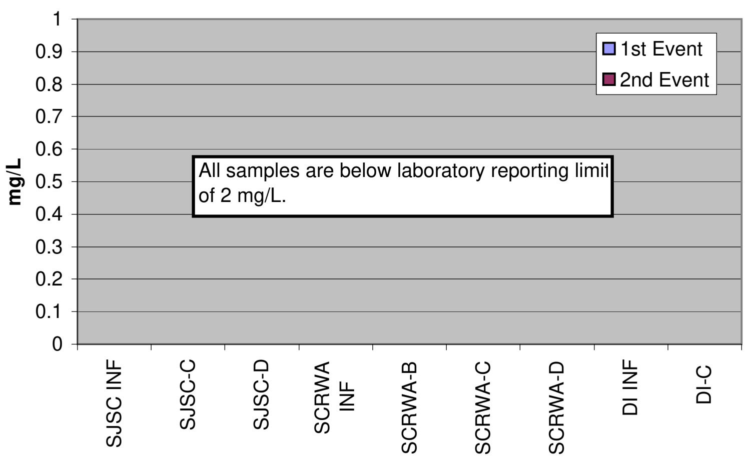


Figure II-3-6 Bicarbonate Alkalinity as HCO3



All samples are below laboratory reporting limit of 2 mg/L.

Figure II-3-7 Carbonate Alkalinity as CaCO3

Note: SJSC INF, SCRWA INF, and DI INF are influent samples.

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Figure II-3-8 Hydroxide Alkalinity as CaCO3

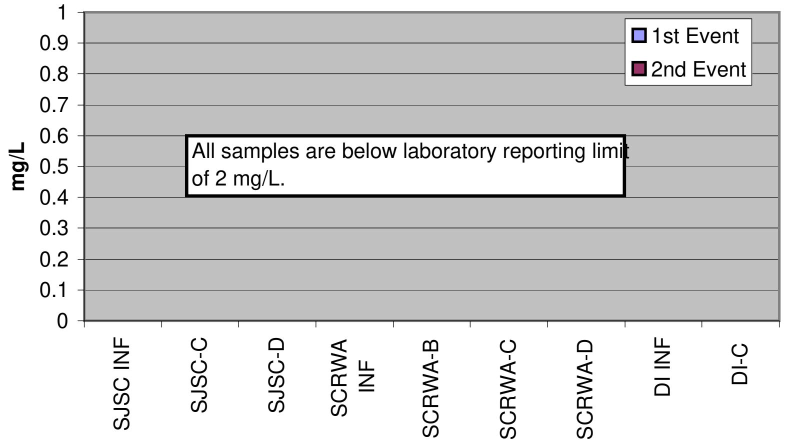


Figure II-3-9 Total Dissolved Solids

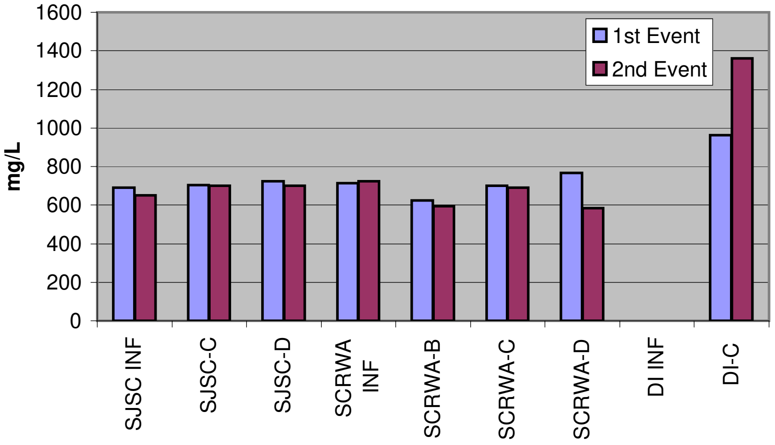


Figure II-3-10 Dissolved Organic Carbon

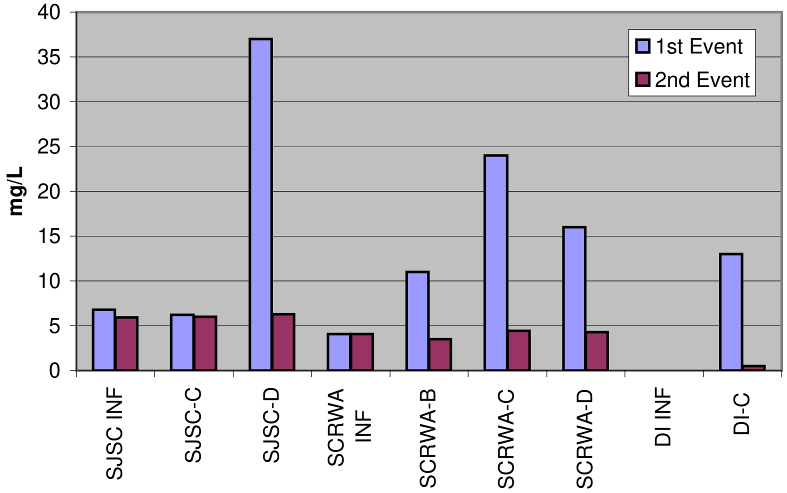
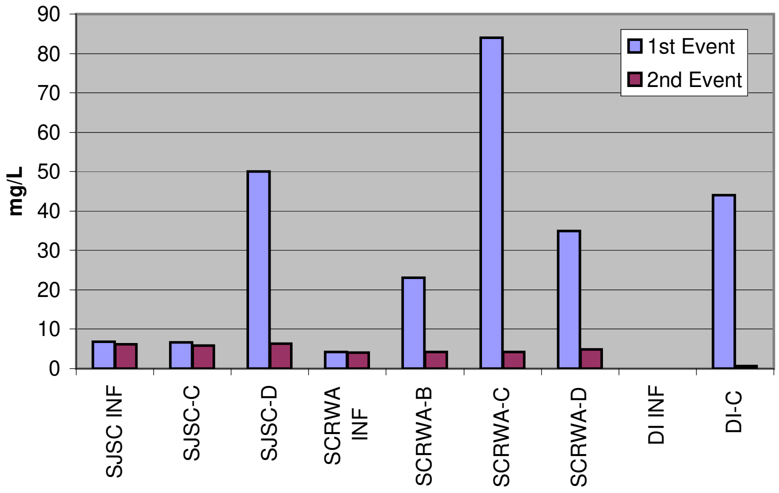


Figure II-3-11 Total Organic Carbon (TOC)



Note: SJSC INF, SCRWA INF, and DI INF are influent samples.

Figure II-3-12 ORP

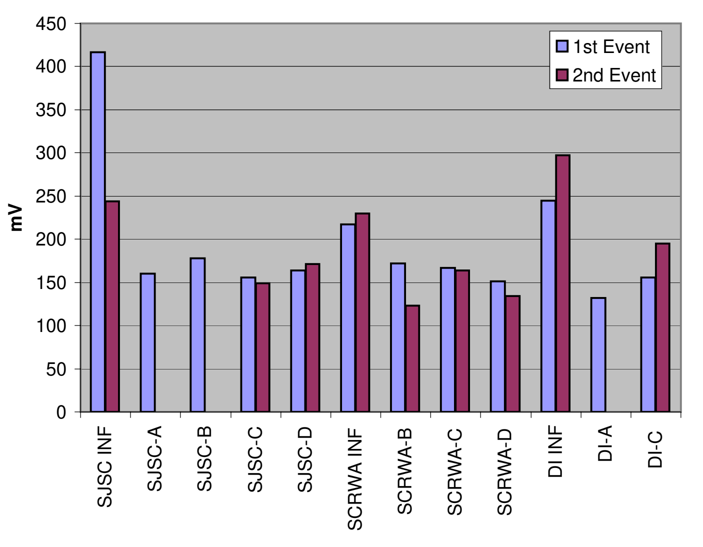


Figure II-3-13 Dissolved Oxygen (DO)

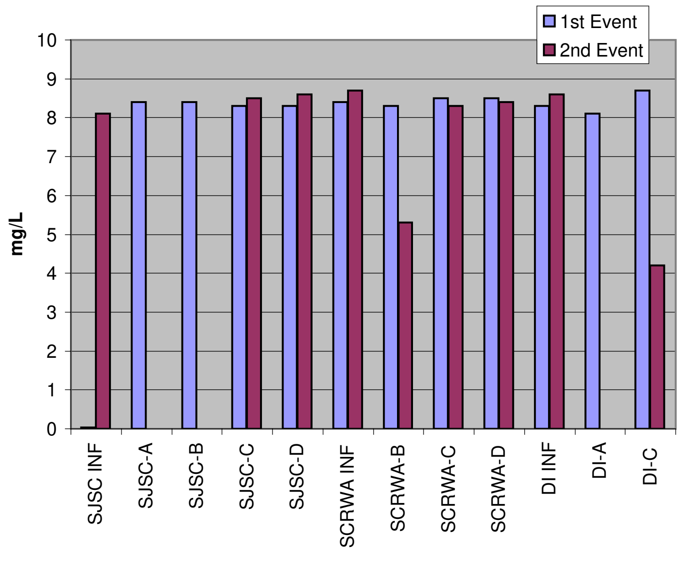


Figure II-3-14 Chloride

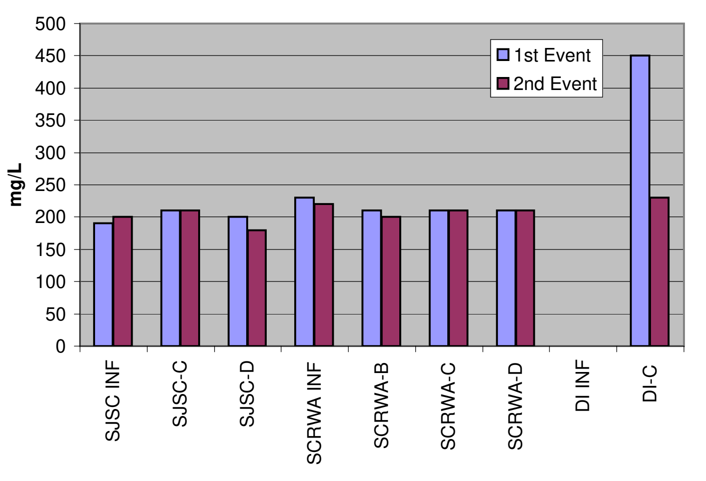
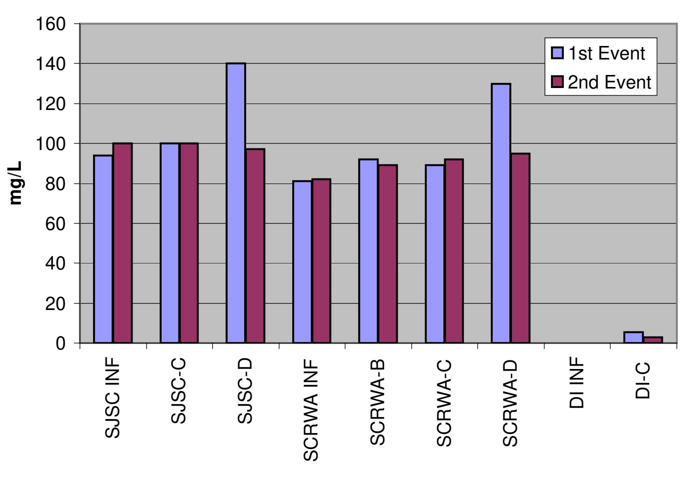
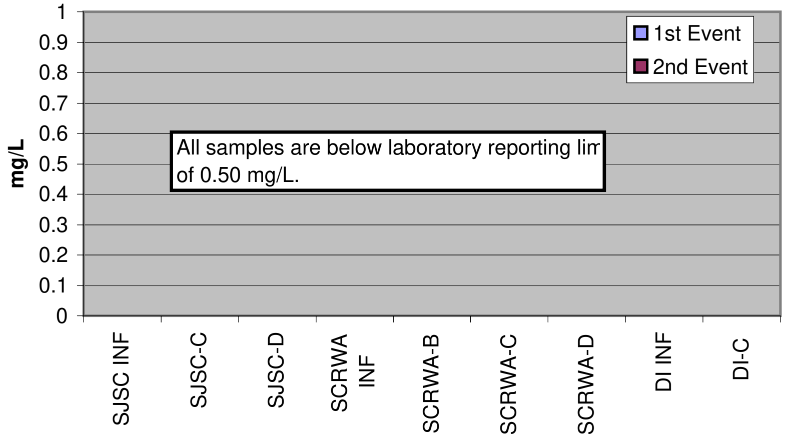


Figure II-3-15 Sulfate as SO4



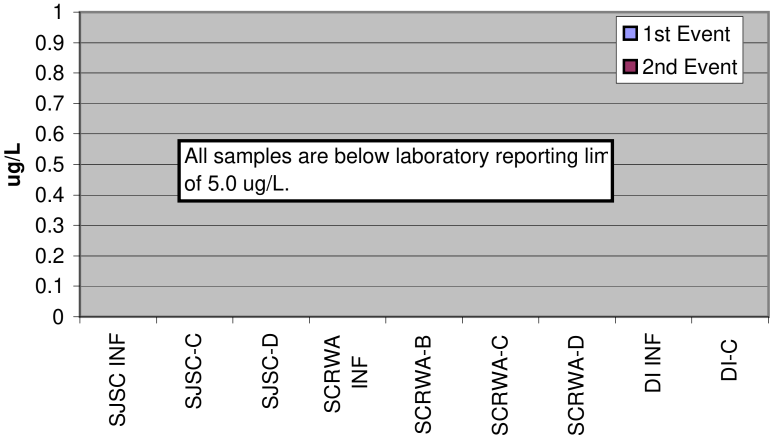
Note: SJSC INF, SCRWA INF, and DI INF are influent samples.

Figure II-3-16 Bromide



All samples are below laboratory reporting lim of 0.50 mg/L.

Figure II-3-17 Total Cyanide



All samples are below laboratory reporting lim of 5.0 ug/L.

Figure II-3-18 Total Boron

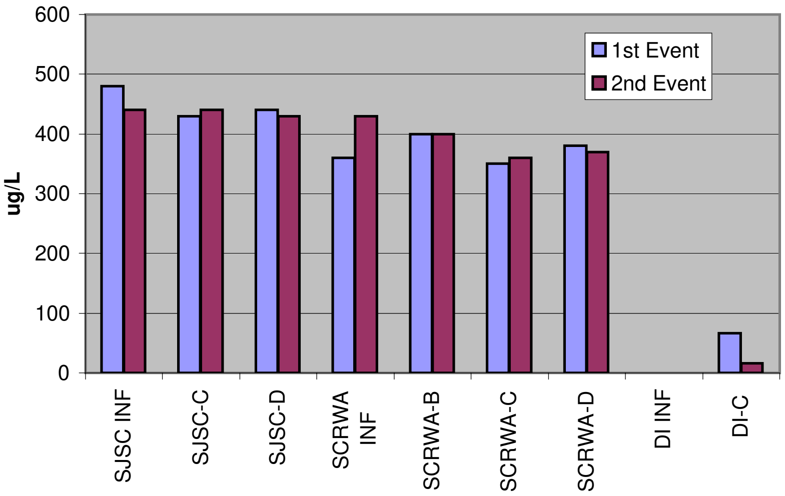
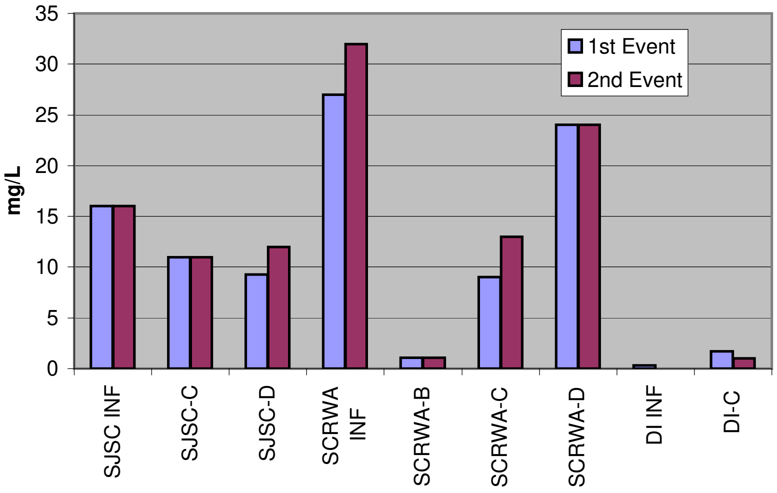


Figure II-3-19 Potassium



Note: SJSC INF, SCRWA INF, and DI INF are influent samples.

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Figure II-3-20 Calcium

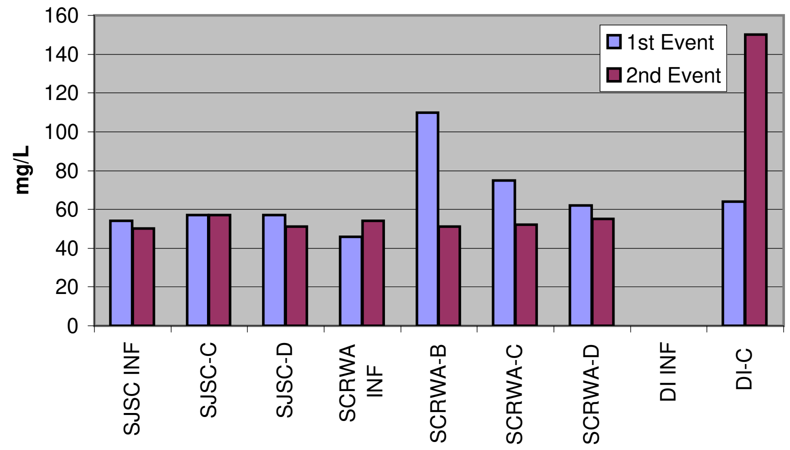


Figure II-3-21 Magnesium

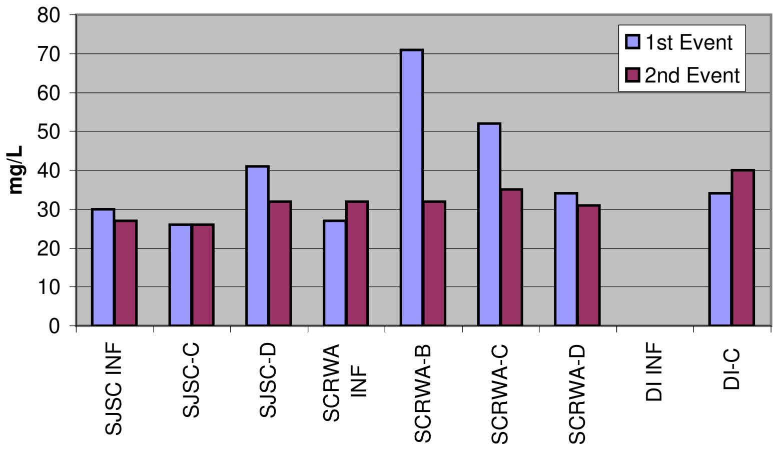


Figure II-3-22 Sodium

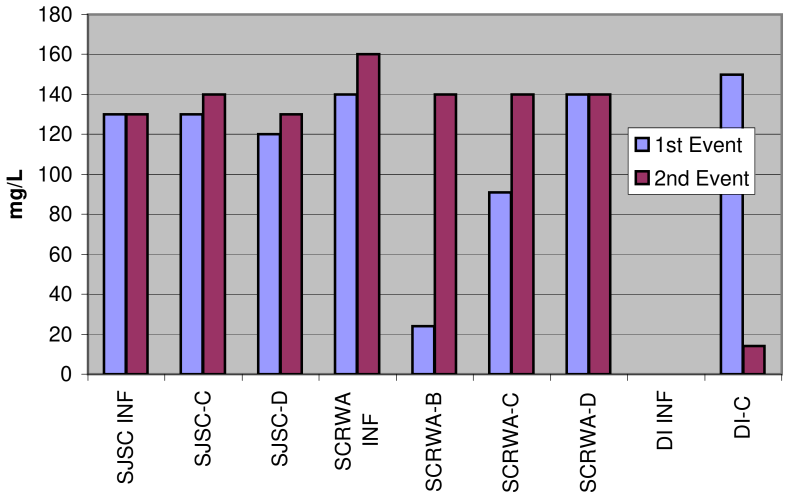
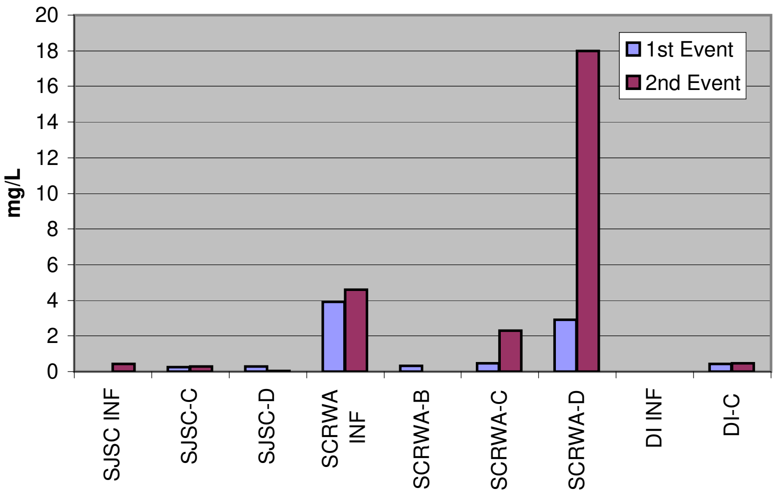
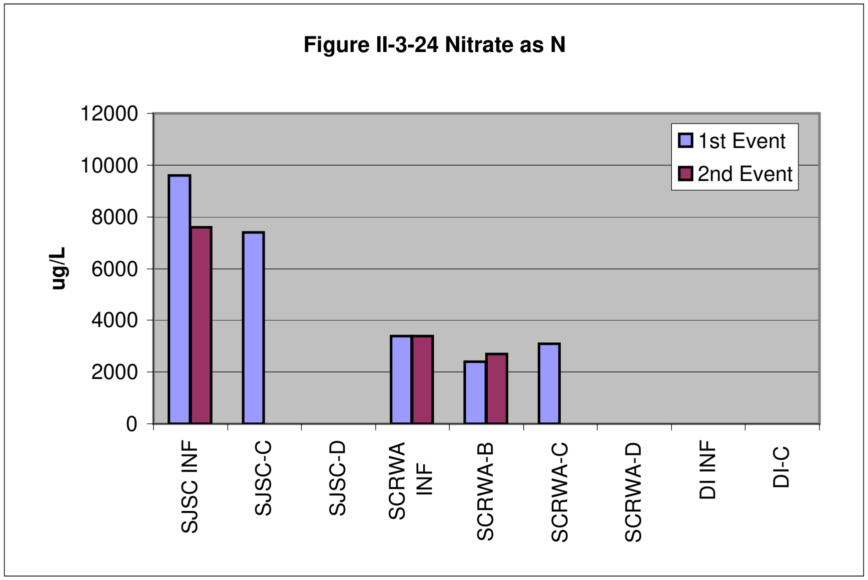
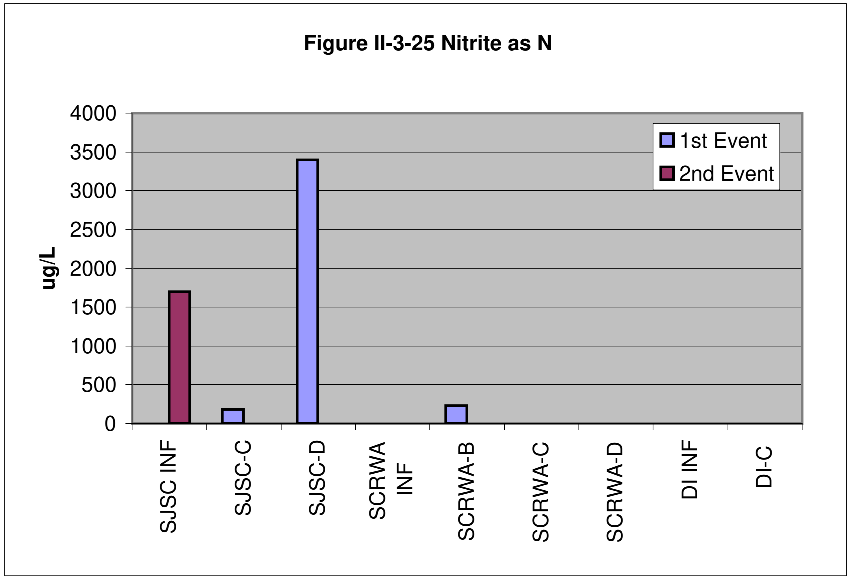


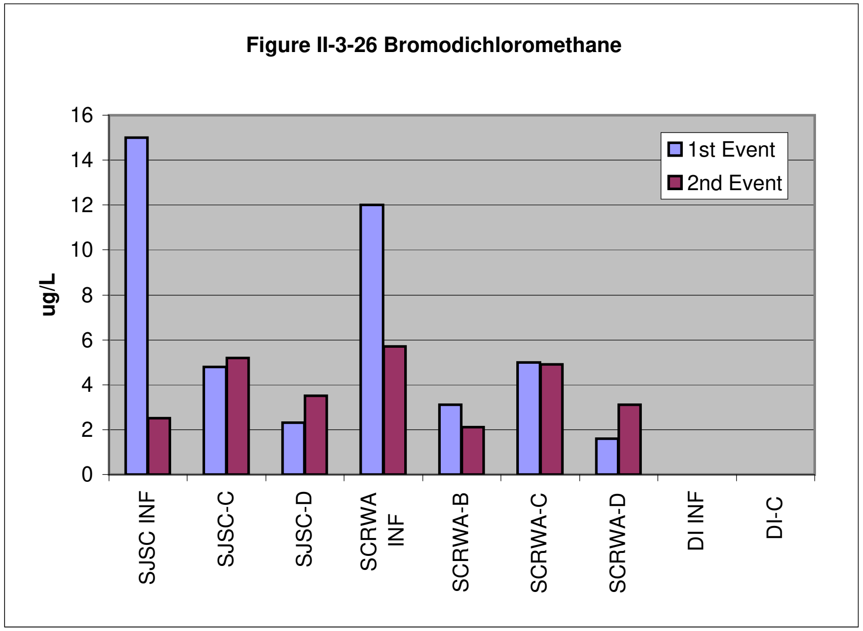
Figure II-3-23 Phosphate, Total as P

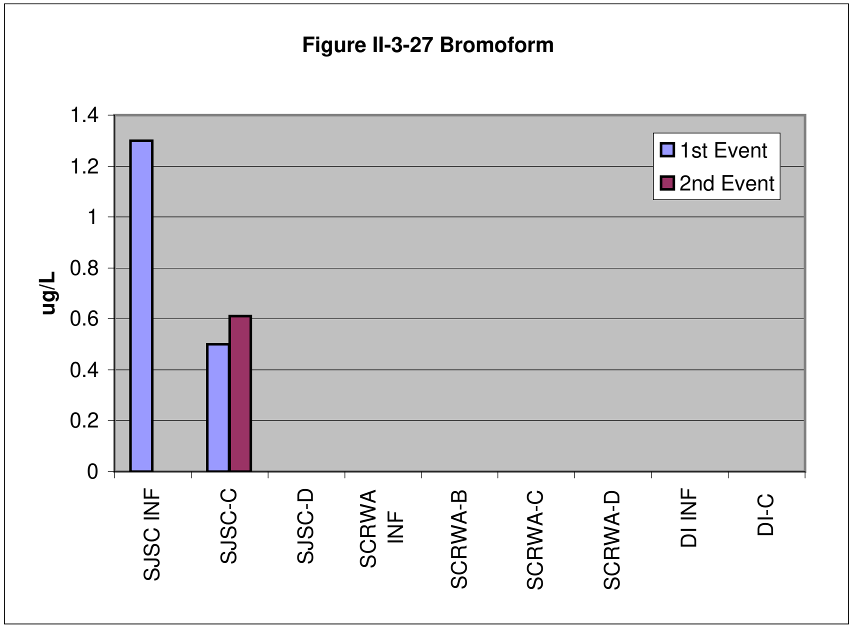


Note: SJSC INF, SCRWA INF, and DI INF are influent samples.









Note: SJSC INF, SCRWA INF, and DI INF are influent samples.

Figure II-3-28 Chloroform

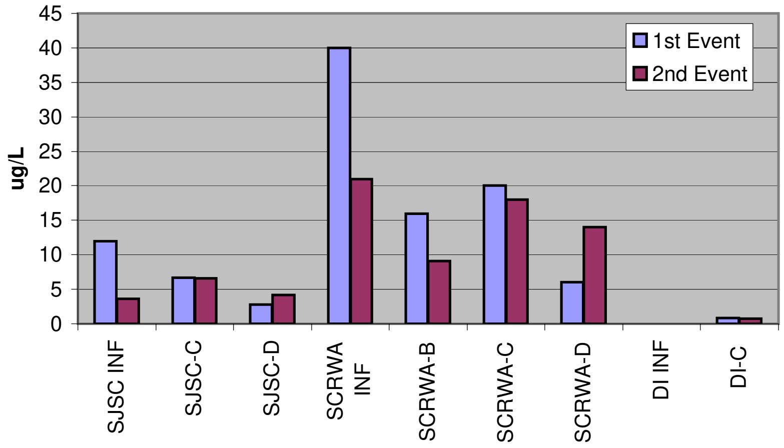


Figure II-3-29 Dibromochloromethane

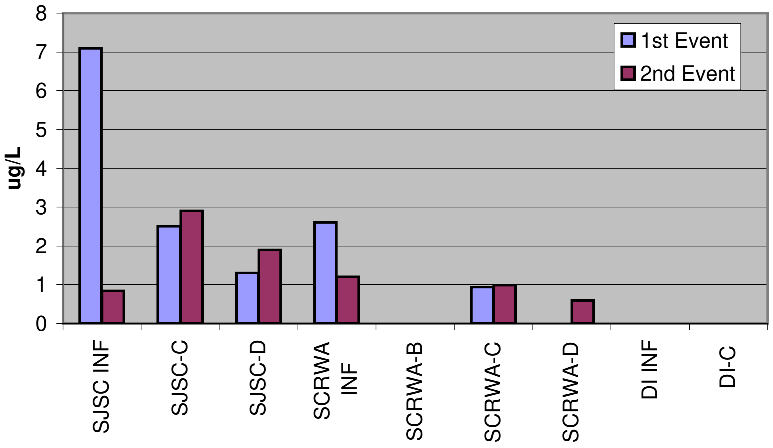


Figure II-3-30 Total HAA5

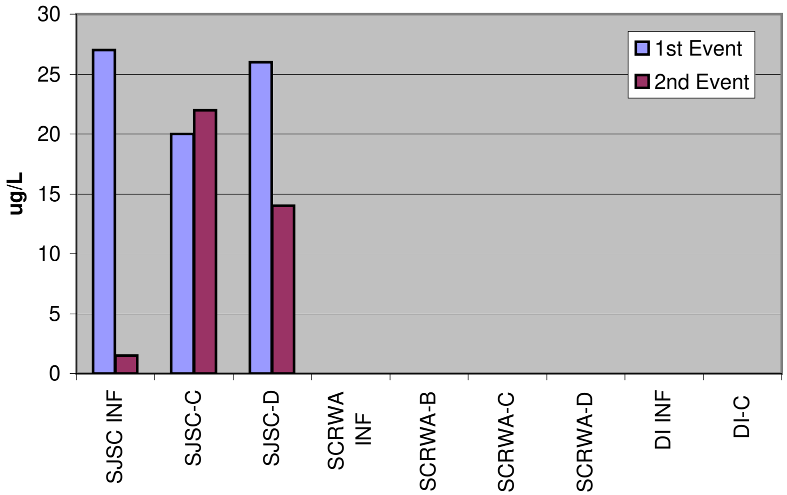
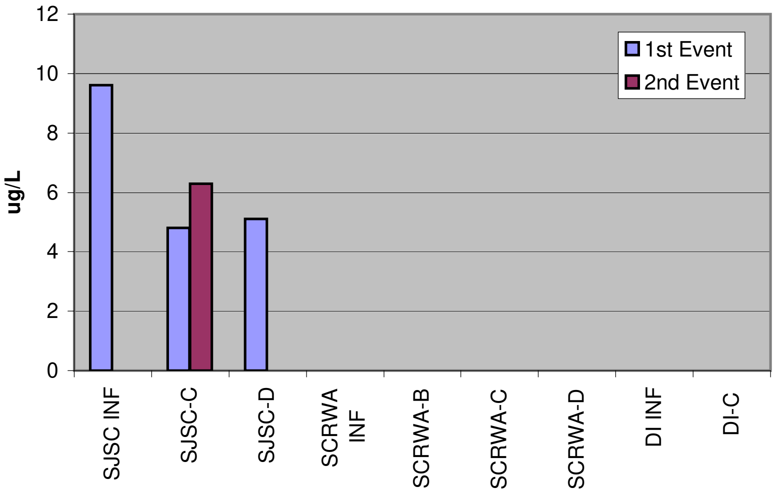


Figure II-3-31 Bromochloroacetic acid (bcaa)



Note: SJSC INF, SCRWA INF, and DI INF are influent samples.

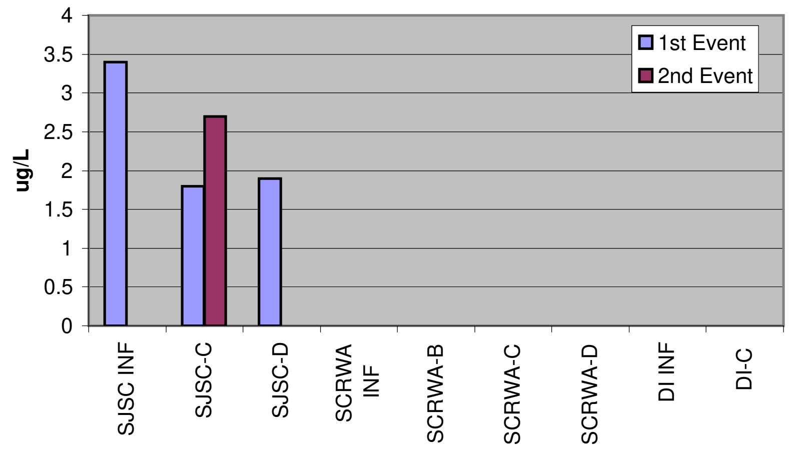


Figure II-3-32 Dibromoacetic acid (dbaa)

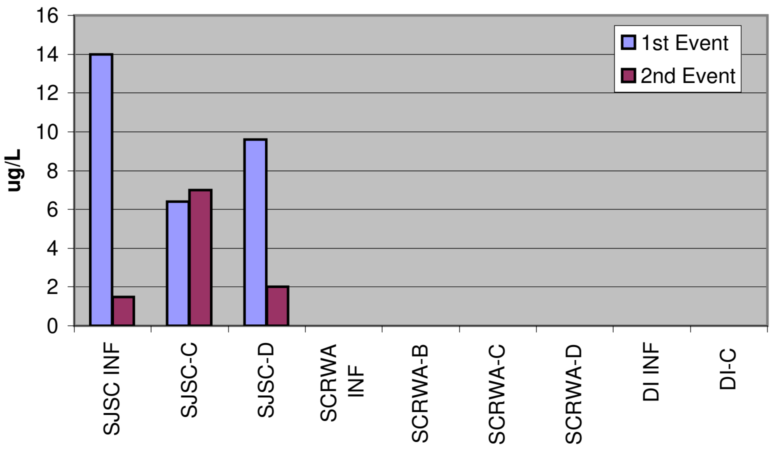


Figure II-3-33 Dichloroacetic acid (dcaa)

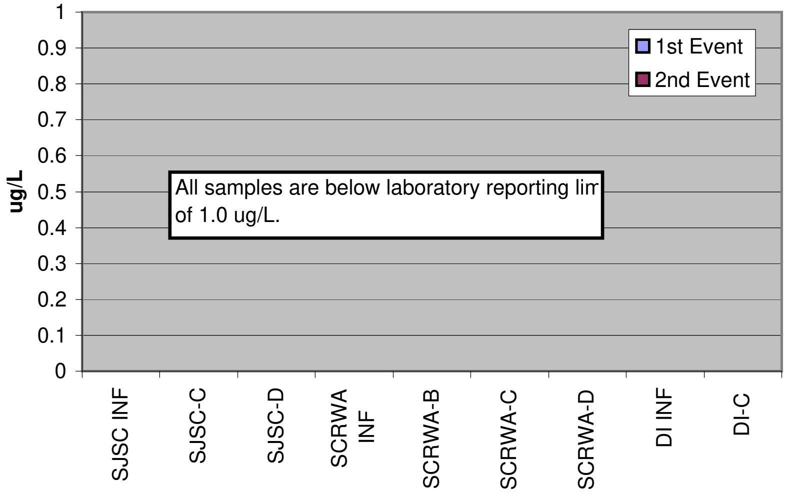


Figure II-3-34 Monobromoacetic acid (mbaa)

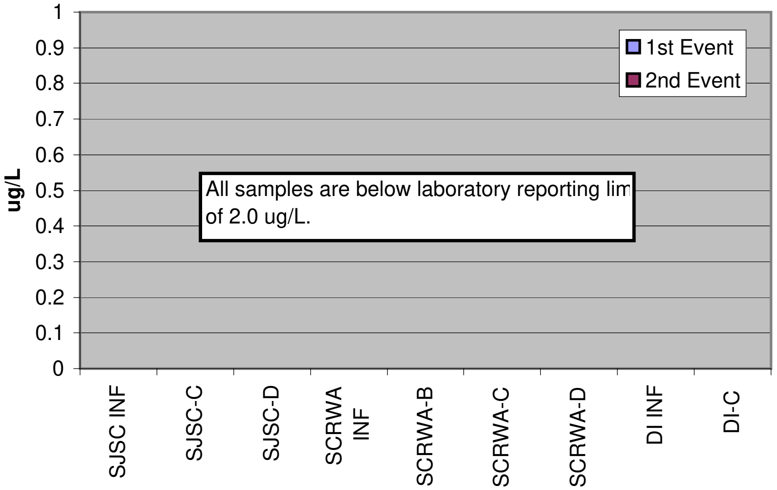


Figure II-3-35 Monochloroacetic acid (mcaa)

Note: SJSC INF, SCRWA INF, and DI INF are influent samples.

Figure II-3-36 Trichloroacetic acid (tcaa)

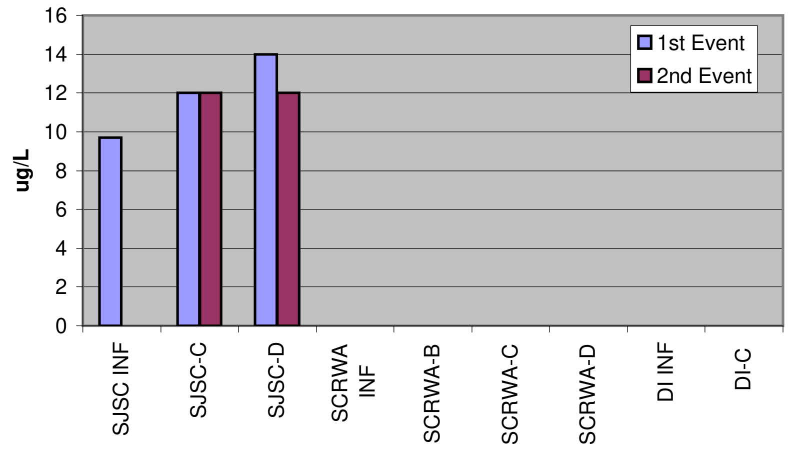


Figure II-3-37 N-Nitroso dimethylamine (NDMA)

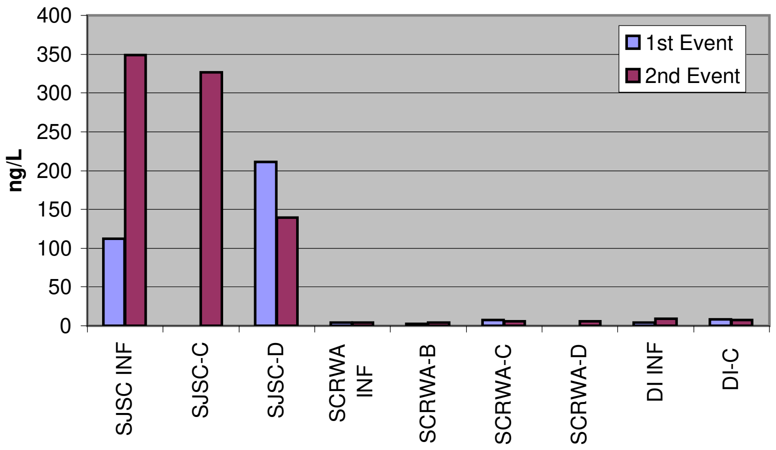
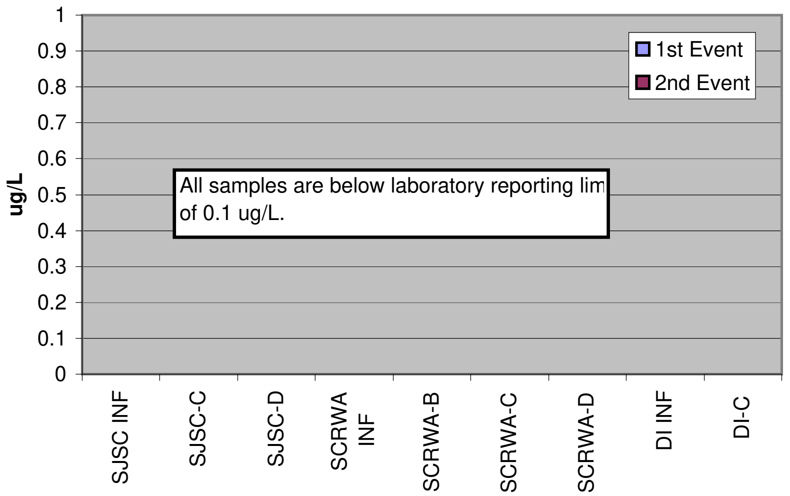
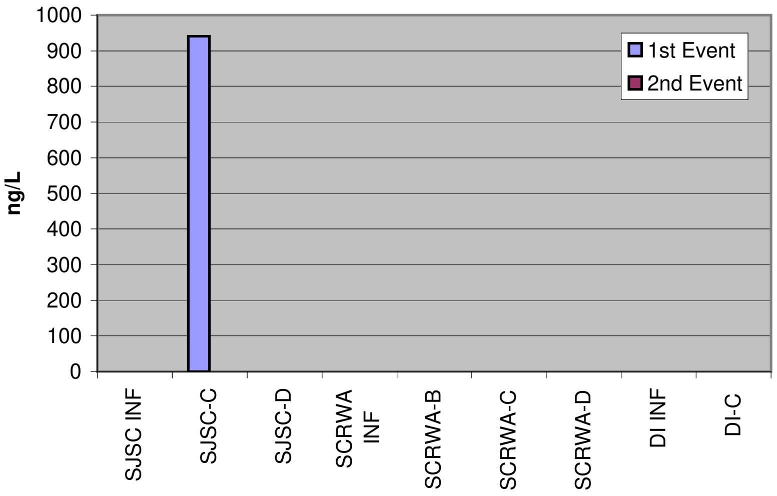


Figure II-3-38 Terbuthylazine

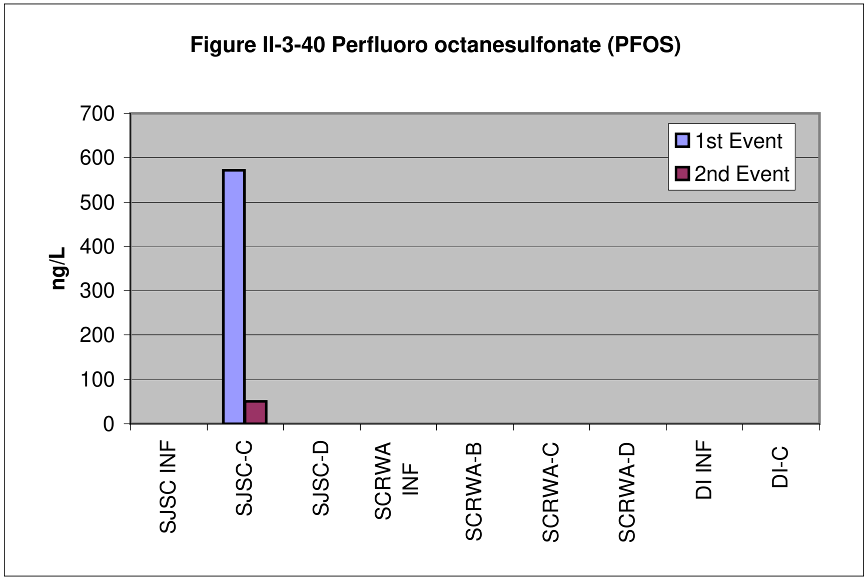


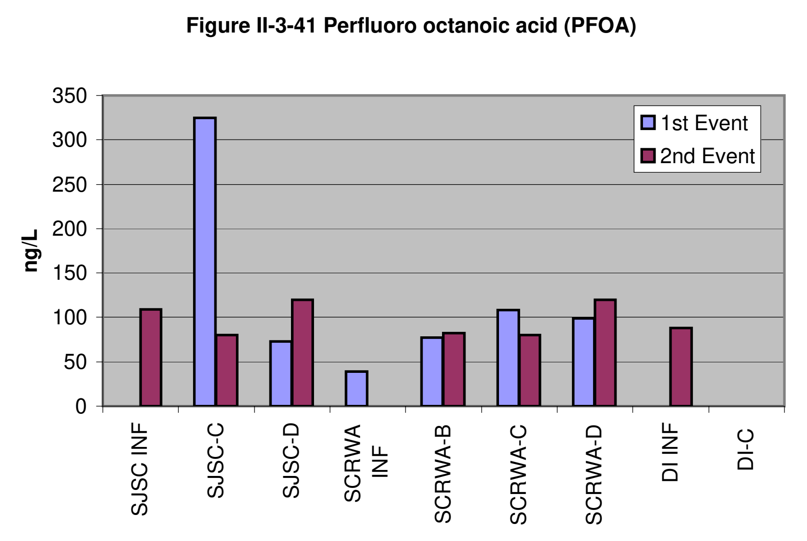
All samples are below laboratory reporting lim of 0.1 ug/L.

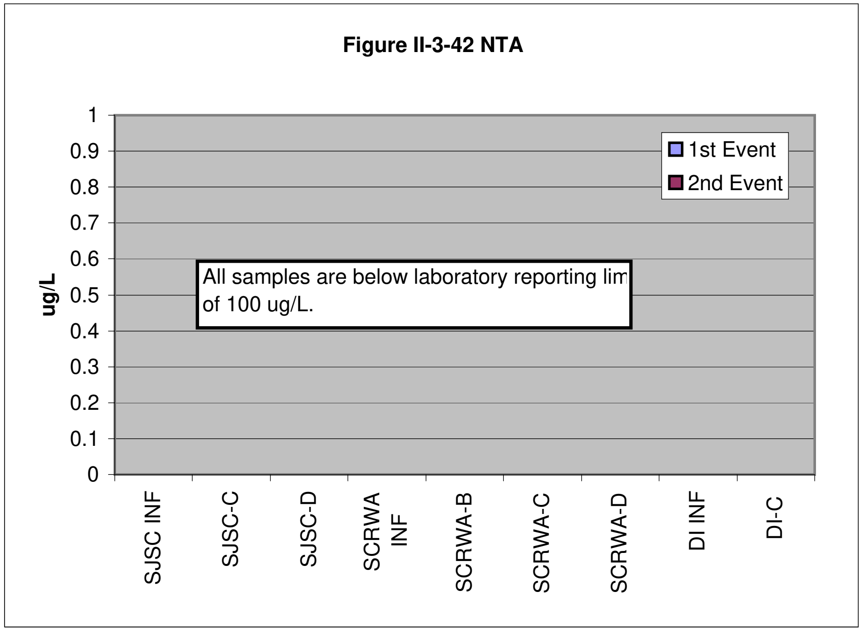
Figure II-3-39 Perfluoro butanoic acid (PFBA)

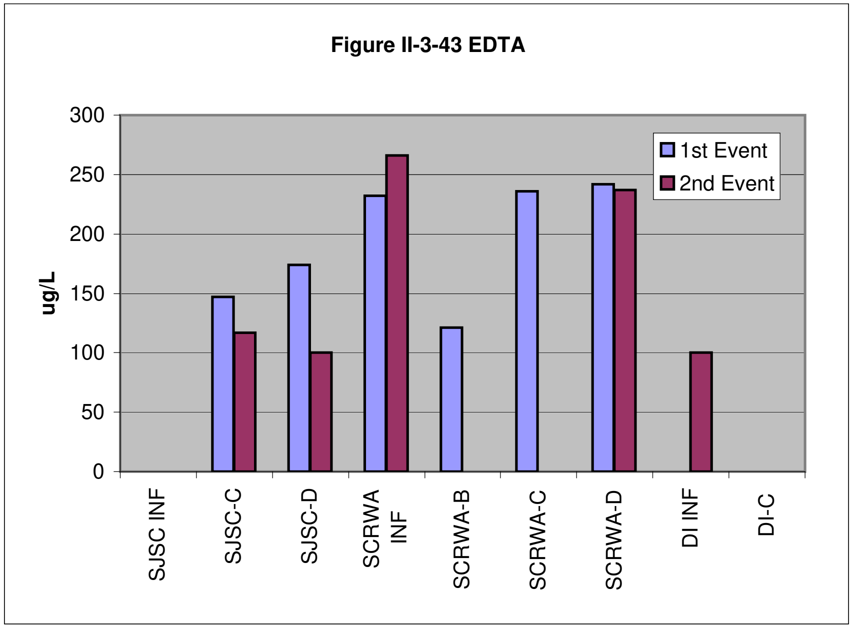


Note: SJSC INF, SCRWA INF, and DI INF are influent samples.









Note: SJSC INF, SCRWA INF, and DI INF are influent samples.

Figure II-3-44 Surfactants (MBAS)

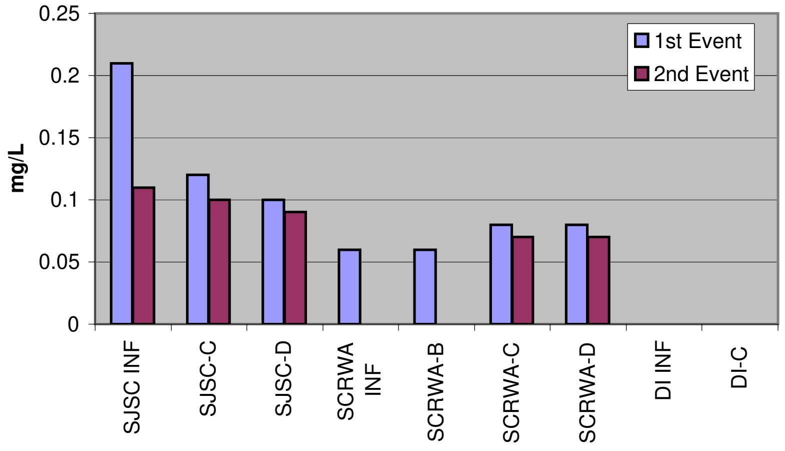


Figure II-3-45 Perchlorate

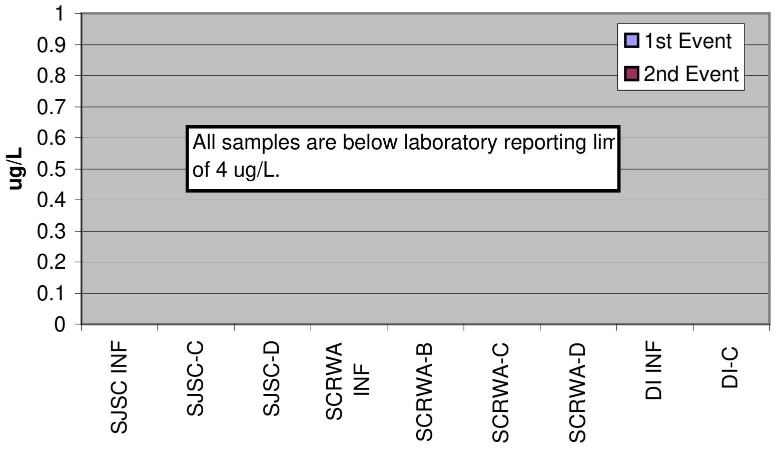


Figure II-3-46 Total Coliform

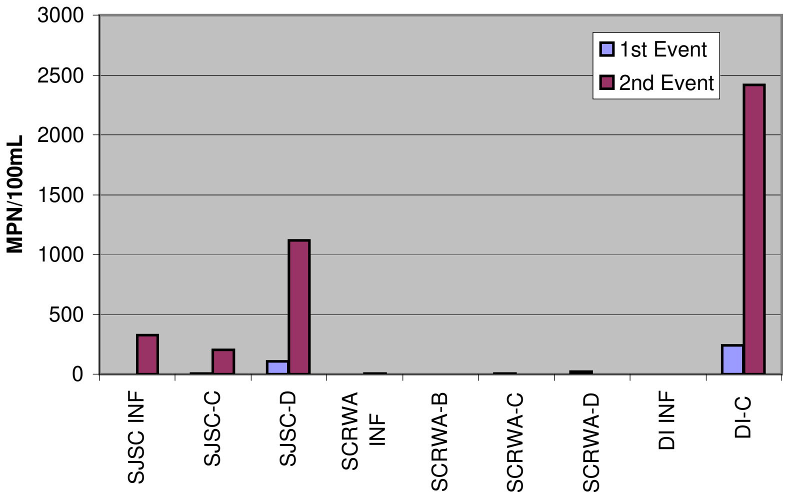
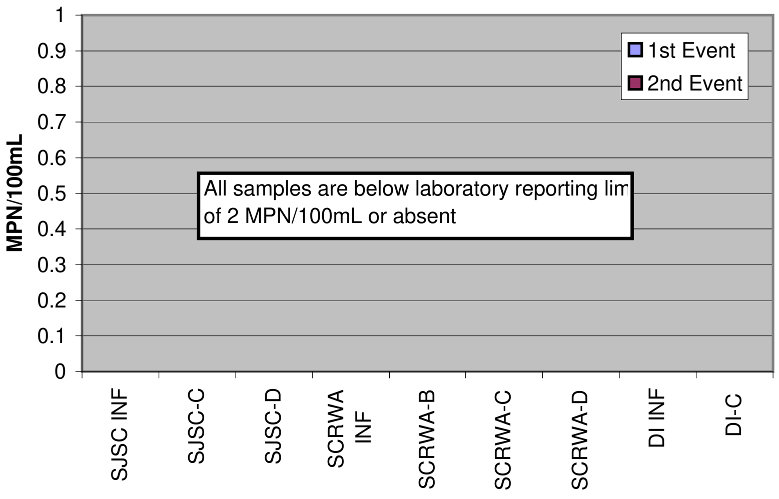
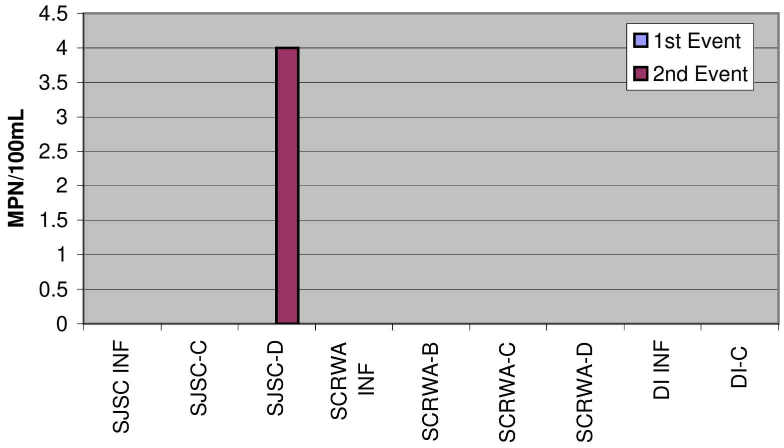


Figure II-3-47 E. Coli



Note: SJSC INF, SCRWA INF, and DI INF are influent samples.

Figure II-3-48 Fecal Coliform



Note: SJSC INF, SCRWA INF, and DI INF are influent samples.

TABLES

TABLE II-2-1
PARAMETER SPECIFIC DATA
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

Parameter	Units	Bromodichloromethane	Chloroform	m-Xylene	NDMA	Assumptions	Reference
Formula weight	gram/mol	163.8	119.4	106.2	74.08		1, 2
Henry's Constant, Hcc	$(mol/L)_{gas}$ / $(mol/L)_{aq}$	6.56E-02	1.50E-01	3.00E-01	4.92E-05		1, 2
Adsorption Isotherm Coefficient, Kd	$meter^3/gram$	1.10E-07	8.00E-08	8.20E-06	5.50E-10	foc = 0.002	1, 2, 3
Diffusion Coefficient in Air	$meter^2/day$	1.99E-03	1.90E-02	3.63E-03	3.92E-05		1, 2
Diffusion Coefficient in Water	$meter^2/day$	9.16E-05	8.64E-05	6.74E-05	1.07E-04		1, 2

Notes:

1. Schwarzenbach, R.P., P.M. Gschewend, and D.M Imboden, 2003, Appendix C, Physiochemical Properties of Organic Compounds, Environmental Organic Chemistry 2nd Ed., pp. 1198-1208

2. Alabama Department of Environmental Management, 2008. Alabama Risk-Based Corrective Action Guidance Manual, Table 3-3 Physical and Chemical Properties.

3. foc = fraction of organic carbon by weight in the soil. Value of 0.002 is recommended in: U.S. EPA, 1996, Soil Screening Guidance, EPA Document Number EPA/540/R-95/128, Part 5: Chemical-Specific Parameters, July.

TABLE II-2-2
SENSITIVITY ANALYSIS INPUT DATA
HYDRUS 1D SOIL ATTENUATION MODEL
RECYCLED WATER STUDY

Parameter	Units	Base Value	Low Range of Parameter		High Range of Parameter		Assumptions	Reference
			Value	Chemical	Value	Chemical		
Henry's Constant, Hcc	$(mol/L)_{gas}$ / $(mol/L)_{aq}$	6.56E-02	1.27E-18	Cyanide	4.00E+00	Trichlorofluoromethane		1
Adsorption Isotherm Coefficient, Kd	$meter^3$/gram	1.10E-07	2.40E-14	Chlordane	8.80E-03	4,4' - DDE	foc = 0.002	1, 3
Diffusion Coefficient in Air	$meter^2$/day	1.99E-03	1.49E-11	Benzo(g,h,i)perylene	1.30E-01	Vinyl Chloride		1
Diffusion Coefficient in Water	$meter^2$/day	9.16E-05	1.04E-05	Vinyl Chloride	1.47E-04	Acetonitrile		1
Bulk Density	gram/$meter^3$	1.50E+06	1.00E+06	N/A	2.00E+06	N/A		2

Notes:

1. Alabama Department of Environmental Management, 2008. Alabama Risk-Based Corrective Action Guidance Manual, Table 3-3 Physical and Chemical Properties.
2. Tan. K.H., 2000, Environmental Soil Science, Second Edition, pp 240.
3. foc = fraction of organic carbon by weight in the soil. Value of 0.002 is recommended in: U.S. EPA, 1996, Soil Screening Guidance, EPA Document Number EPA/540/R-95/128, Part 5: Chemical-Specific Parameters, July.
4. N/A - Not Applicable.

TABLE II-3-1

RECYCLED WATER STUDY

Sampling Priority	Chemical	Method	Lab	Sample Volume (mL)	Hold time (days)
1	ORP		handheld instrument		
2	pH		handheld instrument		
3	Chlorine, Total	Hach kit	handheld instrument	0.1	0.01
4	Dissolved Oxygen	multi-meter	handheld instrument		0.01
5	Alkalinity, Total	SM2320B	Weck	50	14
6	Bicarbonate Alkalinity	SM2320B	Weck	(with alkalinity)	14
7	Boron	EPA 200.7	Weck	250	180
8	Calcium	EPA 200.7	Weck	(with boron)	180
9	Magnesium	EPA 200.7	Weck	(with boron)	180
10	Sodium	EPA 200.7	Weck	(with boron)	180
11	Potassium	EPA 200.7	Weck	(with boron)	180
12	Sulfate	EPA 300.0	Weck	250	28
13	Nitrite	EPA 300.0	Weck	(with sulfate)	2
14	Nitrate	EPA 300.0	Weck	(with sulfate)	2
15	Chloride	EPA 300.0	Weck	(with sulfate)	28
16	Bromide	EPA 300.0	Weck	(with sulfate)	28
17	Total Organic Carbon (TOC)	SM5310C	Weck	250	28
18	Total Filterable Residue at 180C (TDS)	SM2540C	Weck / Cranmer	500	7
19	Dissolved Organic Carbon	SM5310C	Weck	250	28
20	Bromodichloromethane	EPA 524.2	Weck	120	14
21	Bromoform	EPA 524.2	Weck	(with bromodichloromethane)	14
22	Chloroform	EPA 524.2	Weck	(with bromodichloromethane)	14
23	Carbon Tetrachloride	EPA 524.2	Weck	(with bromodichloromethane)	14
24	Dibromochloromethane	EPA 524.2	Weck	(with bromodichloromethane)	14
25	Xylenes, Total	EPA 524.2	Weck	(with bromodichloromethane)	14
26	Additional 8010-list VOCs	EPA 524.2	Weck	(with bromodichloromethane)	14
27	Bromochloroacetic Acid	EPA 552.2	Weck	250	14
28	Dibromoacetic Acid	EPA 552.2	Weck	(with bromochloroacetic)	14
29	Dichloroacetic Acid	EPA 552.2	Weck	(with bromochloroacetic)	14
30	Monobromoacetic Acid	EPA 552.2	Weck	(with bromochloroacetic)	14
31	Monochloroacetic Acid	EPA 552.2	Weck	(with bromochloroacetic)	14
32	Trichloroacetic Acid	EPA 552.2	Weck	(with bromochloroacetic)	14
33	Heterotrophic Plate Count	SM 9215 B	EMLab P&K / Cranmer	150	1
34	Coliforms, Total	SM 9221 B	EMLab P&K / Cranmer	(with HPC)	1
35	Fecal Coliforms	SM 9221 E	EMLab P&K / Cranmer	(with HPC)	1
36	E. Coli	SM 9221 F	EMLab P&K / Cranmer	(with HPC)	1
37	N-Nitroso Dimethylamine (NDMA)	EPA 1625	MWH	2000	7
38	Perchlorate	EPA 314.0	Weck	250	28
39	Cyanide	SM 4500CN E	Weck	500	14
40	Perfluorochemicals	MWH LC/MS/MS	MWH	125	14
41	Phosphate	EPA365.1/0.2	Weck	125	2
42	Nitrilotriacetic acid (NTA)	EPA 300 (mod)	subcontracted by MWH	125	28
43	Ethylenediaminetetraacetic acid (EDTA)	EPA 300 (mod)	subcontracted by MWH	(with NTA)	28
44	Surfactants (MBAS)	SM 5540C	EMLab P&K / Cranmer	1000	2
45	Terbuthylazine	EPA 525 plus	MWH	2000	14
	TOTAL			8195.1	

TABLE II-3-2
PHYSICAL ANALYSIS RESULTS
SOIL CORE BENCH TEST
RECYCLED WATER STUDY

	Location of Derived Sample					Bench Effluent Information				Initial Hydraulic Conductivity (by ASTM D-5084, Method C) (cm/sec)	Sieve Analysis and Hydrometer Test				Clay Mineralogy from X-Ray Diffraction		
Sample ID	Subbasin	Region	Soil Description	Grain Category	USCS Code	Pore Volume (cc)	Number of Pore Volumes Passed	Time Passed (hr)	Final Hydraulic Conductivity (cm/sec)		% Gravel	% Sand	% Silt	% Clay	Main Abundance	Minor (5-10%)	Trace (<5%)
SJSC-A	Santa Clara	Unconfined	brown lean clay	Fine	CL	N/A	<1	2880	<1.06E-06	4.70E-06	1.8	5.8	76	16.5	K, V, S, M	HIM	Q
SJSC-D	Santa Clara	Unconfined	brown silty clay	Fine	CL - ML	203.6	88	17.5	1.40E-02	3.10E-04	1.4	12.3	66.3	20	K, S, C, M	V, HIM, Q	-
SJSC-B	Santa Clara	Unconfined	brown lean clay	Semi-fine	CL	N/A	<1	2880	<1.92E-06	1.10E-08	0.2	12.9	39.9	47	K, M, V	S, Q	-
SJSC-C	Santa Clara	Unconfined	brown poorly graded gravel w/ silt and sand	Coarse	GP - GM	340.8	54	203	1.24E-03	N/A[1]	70.5	21.3	8.2		N/A[1]	N/A[1]	N/A[1]
SCRWA-A	Llagas	Confined	dark gray lean clay with sand	Fine	CL	N/A	<1	2880	<7.00E-07	2.80E-07	0	17.4	58.6	24	S, K	V	Q, M
SCRWA-D	Llagas	Confined	dark gray lean clay w/ sand	Fine	CL	228.3	63	2.42	8.15E-02	5.40E-07	0	28.8	47.2	24	S, K	M, V	Q
SCRWA-B	Llagas	Confined	brown silt w/ sand	Semi-fine	ML	885.7	18.5	63	3.57E-03	5.30E-06	0	41.5	47.5	11	S, K, M, V	-	HIM, Q
SCRWA-C	Llagas	Unconfined	brown well-graded sand w/ gravel	Coarse	SW	529.2	35	6.4	3.97E-02	1.30E-03	33.6	61.5	4.9	0	S, C, K	M, HIM, Q, F	-
DI-A	Santa Clara	Confined	brown silty clay	Fine	CL - ML	N/A	<1	2880	<1.11E-06	2.40E-04	0	1.9	79.1	19	C, K	S, V, HIM	Q
DI-B	Llagas	Unconfined	reddish brown clayey sand w/ gravel	Semi-fine	SC	N/A	<1	2880	<2.06E-06	1.10E-04	20.4	50.5	15.1	14	S, V	-	M
DI-C	Santa Clara	Unconfined	brown well-graded sand w/ silty clay and gravel	Coarse	SW - SC	802.9	23	4.1	6.18E-02	4.00E-04	25.8	63.5	6.7	4	M, K	S, Q	C, F

Notes:

1. Due to high rock content, there was only sufficient material to do a sieve analysis and hydrometer test for SJSC-C; hydraulic conductivity and x-ray diffraction test were not performed
2. SJSC-A, SJSC-B, SCRWA-A, DI-A, DI-B did not have sufficient effluent data to estimate hydraulic conductivity
3. Mineral legend: C = Chlorite, F = Feldspar, HIM = Hydroxy-Interlayered 2:1 Mineral, K = Kaolinite, M = Mica, Q = Quartz, S = Smectite, V = Vermiculite
4. Observed Hydraulic Conductivity dervived from Darcy's Law, K = Q / iA, i is taken as 1 ft/ft
5. N/A - Not applicable.
6. SJSC-D and SCRWA-D are samples with gypsum added.
7. USCS - Unified Soil Classification System
8. Quartz, feldspar, and hydryoxy-interlayer 2:1 mineral are not clay mineral but were observed in testing.

TABLE II-3-3: SJSC-A (fine-grained)
ANALYTICAL DATA
BENCH SCALE TEST
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-A Effluent		% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st
Parameter	Units							
Analytical Method: handheld instrument								
Dissolved Oxygen (DO)	mg/L	0.04	0.04	8.1	8.6	8.4	NA	-20900.0%
ORP	mV	417	417	244	221	160	NA	61.6%
pH		7.4	7.4	7.3	8.0	7.6	NA	-2.7%
Residual Chlorine	mg/L	8.8	8.8	0.0	0.0	0.0	NA	100.0%

Notes:

Dup - denotes a field duplicate sample. A percent difference above 25% is indicative of a significant difference.

NA - denotes not available. For effluent results, this indicates there was inadequate volume to collect a sample. For % Rem, this indicates the value could not be calculated.

% Rem - is the percent concentration removal from influent to effluent of the given round and can be expresed as [(influent - effluent) / inluent]. Non detected values are treated at the reporting limit. A positive value is indicative of removal.

All constituents that could be analayzed are listed in Table II-3-1. In some cases, there was not enough volume to analyze for all the constituents in Table II-3-1.

TABLE II-3-4: SJSC-B (semifine-grained)
ANALYTICAL DATA
BENCH SCALE TEST
RECYCLED WATER STUDY

	Field Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-B Effluent		% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st
Parameter	Units							
Analytical Method: handheld instrument								
Dissolved Oxygen (DO)	mg/L	0.04	0.04	8.1	8.6	8.4	NA	-20900.0%
ORP	mV	417	417	244	221	178	NA	57.3%
pH		7.4	7.4	7.3	8.0	8.0	NA	-8.1%
Residual Chlorine	mg/L	8.8	8.8	0.0	0.0	0.35	NA	96.0%

Notes:

Dup - denotes a field duplicate sample. A percent difference above 25% is indicative of a significant difference.

NA - denotes not available. For effluent results, this indicates there was inadequate volume to collect a sample. For % Rem, this indicates the value could not be calculated.

% Rem - is the percent concentration removal from influent to effluent of the given round and can be expresed as [(influent - effluent) / inluent]. Non detected values are treated at the reporting limit. A positive value is indicative of removal.

All constituents that could be analayzed are listed in Table II-3-1. In some cases, there was not enough volume to analyze for all the constituents in Table II-3-1.

TABLE II-3-5: SJSC-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-C Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 160.1/SM 2540C									
Total Dissolved Solids	mg/L	690	680	652 (C)	649	705 (C)	701	-2.2%	-7.5%
Analytical Method: EPA 1625mod									
N-Nitroso dimethylamine (NDMA)	ng/L	112	116	349	375	ND 2	327	98.2%	6.3%
Analytical Method: EPA 200.7									
Calcium	mg/l	54	53	50	52	57	57	-5.6%	-14.0%
Magnesium	mg/l	30	29	27	28	26	26	13.3%	3.7%
Potassium	mg/l	16	15	16	17	11	11	31.3%	31.3%
Sodium	mg/l	130	130	130	140	130	140	0.0%	-7.7%
Total Boron	µg/L	480	480	440	470	430	440	10.4%	0.0%
Analytical Method: EPA 300 mod									
EDTA	µg/L	ND 100	ND 100	ND 100	159	147	117	-47.0%	-17.0%
NTA	µg/L	ND 100	ND 100	ND 100	ND 100	ND 100	NT	0.0%	NA
Analytical Method: EPA 300.0									
Bromide	mg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloride	mg/l	190	190	200	210	210	210	-10.5%	-5.0%
Nitrate as N	mg/L	9.6 (O-09)	9.3 (O-09)	7.6 (O-04)	7.5	7.4 (O-09)	NT	22.9%	NA
Nitrite as N	mg/L	ND 0.15 (O-09)	ND 0.15 (O-09)	1.7 (O-04)	1.7	0.18 (O-09)	NT	-20.0%	NA
Sulfate as SO4	mg/l	94	96	100	100	100	100	-6.4%	0.0%
Analytical Method: EPA 314.0									
Perchlorate	µg/L	ND 4.0	ND 4.0	ND 4.0	ND 4.0	ND 4.0	ND 4.0	0.0%	0.0%
Analytical Method: EPA 335.4/SM 4500 CN E									
Total Cyanide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Analytical Method: EPA 365.3									
Phosphorus, Total as P	mg/l	NT	NT	0.44	0.54	0.26	0.27	NA	38.6%

TABLE II-3-5: SJSC-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-C Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 425.1/SM 5540C									
Surfactants (MBAS)	mg/l	0.21	0.18	0.11	ND 0.05	0.12	0.10	42.9%	9.1%
Analytical Method: EPA 524.2									
1,1,1,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,1-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3 Dichloropropene (Total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3,5-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Butanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	2200	54	-43900.0%	-980.0%
2-Chloroethyl vinyl ether	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
2-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Hexanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
4-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
4-Methyl-2-pentanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Benzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromochloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

TABLE II-3-5: SJSC-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-C Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 524.2									
Bromodichloromethane	µg/L	15	16	2.5	1.4	4.8	5.2	68.0%	-108.0%
Bromoform	µg/L	1.3	1.3	ND 0.50	ND 0.50	0.50	0.61	61.5%	-22.0%
Bromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Carbon tetrachloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroform	µg/L	12	13	3.6	1.9	6.7	6.6	44.2%	-83.3%
Chloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
cis-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
cis-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Di-isopropyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Dibromochloromethane	µg/L	7.1	7.8	0.84	ND 0.50	2.5	2.9	64.8%	-245.2%
Dibromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Dichlorodifluoromethane (Freon 12)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Ethyl tert-butyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Ethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Freon 113	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Hexachlorobutadiene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Isopropylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
m,p-Xylene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
m-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Methyl tert-butyl ether (MTBE)	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Methylene chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
n-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
n-Propylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Naphthalene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Xylene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

TABLE II-3-5: SJSC-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-C Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 524.2									
p-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
p-Isopropyltoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
sec-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Styrene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tert-amyl methyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
tert-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tetrachloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Toluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.83	0.51	-66.0%	-2.0%
trans-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
trans-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichlorofluoromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Vinyl chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Xylenes (total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Analytical Method: EPA 525.2									
2,4-Dinitrotoluene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
2,6-Dinitrotoluene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDD	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDE	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDT	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthylene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acetochlor	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Alachlor	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Aldrin	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Alpha-BHC	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
alpha-Chlordane	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Anthracene	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%

TABLE II-3-5: SJSC-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-C Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 525.2									
Atrazine	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benz(a)Anthracene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(a)pyrene	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(b)Fluoranthene	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(g,h,i)perylene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(k)Fluoranthene	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Beta-BHC	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Bromacil	µg/L	ND 0.2 (Q5)	ND 0.2 (Q5)	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Butachlor	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
butylbenzylphthalate	µg/L	ND 0.5 (Q5)	ND 0.5 (Q5)	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Caffeine by method 525mod	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Chlorobenzilate	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chloroneb	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorothalonil(Draconil,Bravo)	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorpyrifos (Dursban)	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Chyrsene	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Delta-BHC	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Di(2-Ethylhexyl)phthalate	µg/L	ND 0.6 (Q5)	ND 0.6 (Q5)	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%
Di-(2-Ethylhexyl)adipate	µg/L	ND 0.6 (Q5)	ND 0.6 (Q5)	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%
Di-n-Butylphthalate	µg/L	ND 1 (Q5)	ND 1 (Q5)	ND 1	ND 1	ND 1	ND 1	0.0%	0.0%
Di-N-octylphthalate	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Diazinon (Qualitative)	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dibenz(a,h)Anthracene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dichlorvos (DDVP)	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dieldrin	µg/L	ND 0.2 (Q5)	ND 0.2 (Q5)	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Diethylphthalate	µg/L	ND 0.5 (Q5)	ND 0.5 (Q5)	1.3	1.3	ND 0.5	ND 0.5	0.0%	61.5%
Dimethoate	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dimethylphthalate	µg/L	ND 0.5 (Q5)	ND 0.5 (Q5)	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%

Locus TECHNOLOGIES

TABLE II-3-5: SJSC-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-C Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 525.2									
Endosulfan I (Alpha)	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan II (Beta)	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan Sulfate	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endrin Aldehyde	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endrin	µg/L	ND 0.2 (Q5)	ND 0.2 (Q5)	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
EPTC	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluoranthene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluorene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
gamma-Chlordane	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor Epoxide (isomer B)	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor	µg/L	ND 0.03 (Q5)	ND 0.03 (Q5)	ND 0.03	ND 0.03	ND 0.03	ND 0.03	0.0%	0.0%
Hexachlorobenzene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Hexachlorocyclopentadiene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Indeno(1,2,3,c,d)Pyrene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Isophorone	µg/L	ND 0.5 (Q5)	ND 0.5 (Q5)	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Lindane	µg/L	ND 0.04 (Q5)	ND 0.04 (Q5)	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Malathion	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Methoxychlor	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Metolachlor	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
metribuzin	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Molinate	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Naphthalene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Parathion	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Pendimethalin	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Pentachlorophenol	µg/L	ND 1 (Q5)	ND 1 (Q5)	ND 1	ND 1	ND 1	ND 1	0.0%	0.0%
Permethrin (mixed isomers)	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Phenanthrene	µg/L	ND 0.04 (Q5)	ND 0.04 (Q5)	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Propachlor	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%

TABLE II-3-5: SJSC-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-C Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 525.2									
Pyrene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Simazine	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Terbacil	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Terbuthylazine	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Thiobencarb	µg/L	ND 0.2 (Q5)	ND 0.2 (Q5)	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
trans-Nonachlor	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Trifluralin	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Analytical Method: EPA 552.2									
Bromochloroacetic acid (bcaa)	µg/L	9.6	10	ND 1.0	ND 1.0	4.8	6.3	50.0%	-530.0%
Dibromoacetic acid (dbaa)	µg/L	3.4	3.3	ND 1.0	ND 1.0	1.8	2.7	47.1%	-170.0%
Dichloroacetic acid (dcaa)	µg/L	14	15	1.5	1.2	6.4	7.0	54.3%	-366.7%
Monobromoacetic acid (mbaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Monochloroacetic acid (mcaa)	µg/L	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Total HAA5	µg/L	27	29	1.5	1.2	20	22	25.9%	-1366.7%
Trichloroacetic acid (tcaa)	µg/L	9.7	11	ND 1.0	ND 1.0	12	12	-23.7%	-1100.0%
Analytical Method: handheld instrument									
Dissolved Oxygen (DO)	mg/L	0.040	NT	8.1	8.6	8.3	8.5	-20650.0%	-4.9%
ORP	mV	417	NT	244	221	156	149	62.6%	38.9%
pH		7.4	NT	7.3	8.0	7.9	7.7	-6.8%	-5.5%
Residual Chlorine	mg/L	8.8	NT	0.0	0.0	1.2	0.52	86.4%	NA
Analytical Method: MWH PFC									
Perfluoro butanoic acid (PFBA)	ng/L	ND 50	ND 50	ND 50	ND 50	940	ND 50	-1780.0%	0.0%
Perfluoro octanesulfonate (PFOS)	ng/L	ND 50	ND 50	ND 50	ND 50	572	51	-1044.0%	-2.0%
Perfluoro octanoic acid (PFOA)	ng/L	ND 20	29	109	80	325	80	-1525.0%	26.6%
Analytical Method: SM 2320B									
Alkalinity as CaCO3	mg/l	190	190	160	170	180	180	5.3%	-12.5%
Bicarbonate Alkalinity as HCO3	mg/l	230	230	200	210	220	220	4.3%	-10.0%
Carbonate Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%

TABLE II-3-5: SJSC-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-C Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: SM 2320B									
Hydroxide Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Analytical Method: SM 5310C									
Dissolved Organic Carbon	mg/l	6.8	7.0	5.9	6.0	6.2	6.0	8.8%	-1.7%
Total Organic Carbon (TOC)	mg/l	6.9	6.9	6.1	6.0	6.7	5.9	2.9%	3.3%
Analytical Method: SM 9215B									
Heterotrophic Plate Count (HPC)	CFU/mL	2.0	6.0	41765	68090	Too High	1779500	NA	-4160.7%
Analytical Method: SM 9221/9221B									
Total Coliform	MPN/100mL	ND 2	ND 2	9.0 (C)	4.0	8.0	80	-300.0%	-788.9%
Analytical Method: SM 9221/9221E									
Fecal Coliform	MPN/100mL	ND 2	ND 2	ND 2 (C)	ND 2	ND 2	ND 2	0.0%	0.0%
Analytical Method: SM 9221F/9223									
E. coli	MPN/100mL	ND 2	ND 2	Absent (C)	Absent	Absent	Absent	NA	NA
Total Coliform	MPN/100mL	NT	NT	326 (C)	411	4.1	205	NA	37.1%

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Notes:

ND - denotes result was below the detection limit
NT - dentoes sample was not tested
Dup - denotes a field duplicate sample. A percent difference above 25% is indicative of a significant difference.
NA - denotes not available. For effluent results, this indicates there was inadequate volume to collect a sample. For % Rem, this indicates the value could not be calculated.
% Rem - is the percent concentration removal from influent to effluent of the given round and can be expresed as [(influent - effluent) / inluent]. Non detected values are treated at the reporting limit. A positive value is indicative of removal.
Nitrate and Nitrite not tested in the core effluent secound round because hold time of sample would have been significantly exceeded
All constituents that could be analayzed are listed in Table II-3-1. In some cases, there was not enough volume to analyze for all the constituents in Table II-3-1.

Flags:

C - The sample was analyzed beyond holding time
Q5 - Sample received with inadequate chemcial perservation, but perserved by the laboratory.
O-04 - This analysis was performed outside the EPA recommended holding time.
O-09 - This sample was received with the EPA recommended holding time expired.

TABLE II-3-6: SJSC-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-D Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 160.1/SM 2540C									
Total Dissolved Solids	mg/L	690	680	652 (C)	649	723 (C)	700	-4.8%	-7.4%
Analytical Method: EPA 1625mod									
N-Nitroso dimethylamine (NDMA)	ng/L	112	116	349	375	211	139	-88.4%	60.2%
Analytical Method: EPA 200.7									
Calcium	mg/l	54	53	50	52	57	51	-5.6%	-2.0%
Magnesium	mg/l	30	29	27	28	41	32	-36.7%	-18.5%
Potassium	mg/l	16	15	16	17	9.3	12	41.9%	25.0%
Sodium	mg/l	130	130	130	140	120	130	7.7%	0.0%
Total Boron	µg/L	480	480	440	470	440	430	8.3%	2.3%
Analytical Method: EPA 300 mod									
EDTA	µg/L	ND 100	ND 100	ND 100	159	174	100	-74.0%	0.0%
NTA	µg/L	ND 100	ND 100	ND 100	ND 100	ND 100	ND 100	0.0%	0.0%
Analytical Method: EPA 300.0									
Bromide	mg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloride	mg/l	190	190	200	210	200	180	-5.3%	10.0%
Nitrate as N	mg/L	9.6 (O-09)	9.3 (O-09)	7.6 (O-04)	7.5	ND 0.11 (O-09)	NT	98.9%	NA
Nitrite as N	mg/L	ND 0.15 (O-09)	ND 0.15 (O-09)	1.7 (O-04)	1.7	3.4 (O-09)	NT	-2166.7%	NA
Sulfate as SO4	mg/l	94	96	100	100	140	97	-48.9%	3.0%
Analytical Method: EPA 314.0									
Perchlorate	µg/L	ND 4.0	ND 4.0	ND 4.0	ND 4.0	ND 4.0	ND 4.0	0.0%	0.0%
Analytical Method: EPA 335.4/SM 4500 CN E									
Total Cyanide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Analytical Method: EPA 365.3									
Phosphorus, Total as P	mg/l	NT	NT	0.44	0.54	0.28	0.053	NA	88.0%

TABLE II-3-6: SJSC-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-D Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 425.1/SM 5540C									
Surfactants (MBAS)	mg/L	0.21	0.18	0.11	ND 0.05	0.10	0.090	52.4%	18.2%
Analytical Method: EPA 524.2									
1,1,1,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,1-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3 Dichloropropene (Total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3,5-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Butanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	62000	14	-1239900%	-180.0%
2-Chloroethyl vinyl ether	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
2-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Hexanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
4-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
4-Methyl-2-pentanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Benzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromochloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

TABLE II-3-6: SJSC-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-D Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 524.2									
Bromodichloromethane	µg/L	15	16	2.5	1.4	2.3	3.5	84.7%	-40.0%
Bromoform	µg/L	1.3	1.3	ND 0.50	ND 0.50	ND 0.50	ND 0.50	61.5%	0.0%
Bromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Carbon tetrachloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroform	µg/L	12	13	3.6	1.9	2.8	4.2	76.7%	-16.7%
Chloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.61	ND 0.50	-22.0%	0.0%
cis-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
cis-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Di-isopropyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Dibromochloromethane	µg/L	7.1	7.8	0.84	ND 0.50	1.3	1.9	81.7%	-126.2%
Dibromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Dichlorodifluoromethane (Freon 12)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Ethyl tert-butyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Ethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Freon 113	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Hexachlorobutadiene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Isopropylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
m,p-Xylene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
m-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Methyl tert-butyl ether (MTBE)	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Methylene chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.60	ND 0.50	-20.0%	0.0%
n-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
n-Propylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Naphthalene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Xylene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

TABLE II-3-6: SJSC-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-D Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 524.2									
p-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
p-Isopropyltoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
sec-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Styrene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tert-amyl methyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
tert-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tetrachloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Toluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.96	ND 0.50	-92.0%	0.0%
trans-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
trans-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichlorofluoromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Vinyl chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Xylenes (total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Analytical Method: EPA 525.2									
2,4-Dinitrotoluene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
2,6-Dinitrotoluene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDD	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDE	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDT	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthylene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acetochlor	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Alachlor	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Aldrin	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Alpha-BHC	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
alpha-Chlordane	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Anthracene	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%

TABLE II-3-6: SJSC-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-D Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 525.2									
Atrazine	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benz(a)Anthracene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(a)pyrene	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(b)Fluoranthene	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(g,h,i)perylene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(k)Fluoranthene	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Beta-BHC	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Bromacil	µg/L	ND 0.2 (Q5)	ND 0.2 (Q5)	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Butachlor	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
butylbenzylphthalate	µg/L	ND 0.5 (Q5)	ND 0.5 (Q5)	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Caffeine by method 525mod	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Chlorobenzilate	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chloroneb	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorothalonil(Draconil,Bravo)	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorpyrifos (Dursban)	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Chyrsene	µg/L	ND 0.02 (Q5)	ND 0.02 (Q5)	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Delta-BHC	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Di(2-Ethylhexyl)phthalate	µg/L	ND 0.6 (Q5)	ND 0.6 (Q5)	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%
Di-(2-Ethylhexyl)adipate	µg/L	ND 0.6 (Q5)	ND 0.6 (Q5)	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%
Di-n-Butylphthalate	µg/L	ND 1 (Q5)	ND 1 (Q5)	ND 1	ND 1	ND 1	ND 1	0.0%	0.0%
Di-N-octylphthalate	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Diazinon (Qualitative)	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dibenz(a,h)Anthracene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dichlorvos (DDVP)	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dieldrin	µg/L	ND 0.2 (Q5)	ND 0.2 (Q5)	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Diethylphthalate	µg/L	ND 0.5 (Q5)	ND 0.5 (Q5)	1.3	1.3	ND 0.5	ND 0.5	0.0%	61.5%
Dimethoate	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dimethylphthalate	µg/L	ND 0.5 (Q5)	ND 0.5 (Q5)	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%

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TABLE II-3-6: SJSC-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-D Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 525.2									
Endosulfan I (Alpha)	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan II (Beta)	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan Sulfate	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endrin Aldehyde	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endrin	µg/L	ND 0.2 (Q5)	ND 0.2 (Q5)	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
EPTC	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluoranthene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluorene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
gamma-Chlordane	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor Epoxide (isomer B)	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor	µg/L	ND 0.03 (Q5)	ND 0.03 (Q5)	ND 0.03	ND 0.03	ND 0.03	ND 0.03	0.0%	0.0%
Hexachlorobenzene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Hexachlorocyclopentadiene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Indeno(1,2,3,c,d)Pyrene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Isophorone	µg/L	ND 0.5 (Q5)	ND 0.5 (Q5)	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Lindane	µg/L	ND 0.04 (Q5)	ND 0.04 (Q5)	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Malathion	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Methoxychlor	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Metolachlor	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
metribuzin	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Molinate	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Naphthalene	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Parathion	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Pendimethalin	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Pentachlorophenol	µg/L	ND 1 (Q5)	ND 1 (Q5)	ND 1	ND 1	ND 1	ND 1	0.0%	0.0%
Permethrin (mixed isomers)	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Phenanthrene	µg/L	ND 0.04 (Q5)	ND 0.04 (Q5)	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Propachlor	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%

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TABLE II-3-6: SJSC-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-D Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: EPA 525.2									
Pyrene	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Simazine	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Terbacil	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Terbuthylazine	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Thiobencarb	µg/L	ND 0.2 (Q5)	ND 0.2 (Q5)	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
trans-Nonachlor	µg/L	ND 0.05 (Q5)	ND 0.05 (Q5)	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Trifluralin	µg/L	ND 0.1 (Q5)	ND 0.1 (Q5)	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Analytical Method: EPA 552.2									
Bromochloroacetic acid (bcaa)	µg/L	9.6	10	ND 1.0	ND 1.0	5.1	ND 1.0	46.9%	0.0%
Dibromoacetic acid (dbaa)	µg/L	3.4	3.3	ND 1.0	ND 1.0	1.9	ND 1.0	44.1%	0.0%
Dichloroacetic acid (dcaa)	µg/L	14	15	1.5	1.2	9.6	2.0	31.4%	-33.3%
Monobromoacetic acid (mbaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Monochloroacetic acid (mcaa)	µg/L	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Total HAA5	µg/L	27	29	1.5	1.2	26	14	3.7%	-833.3%
Trichloroacetic acid (tcaa)	µg/L	9.7	11	ND 1.0	ND 1.0	14	12	-44.3%	-1100.0%
Analytical Method: handheld instrument									
Dissolved Oxygen (DO)	mg/L	0.040	NT	8.1	8.6	8.3	8.6	-20650.0%	-6.2%
ORP	mV	417	NT	244	221	164	171	60.7%	29.9%
pH		7.4	NT	7.3	8.0	8.0	8.0	-8.1%	-9.6%
Residual Chlorine	mg/L	8.8	NT	0.0	0.0	0.0	0.0	100.0%	NA
Analytical Method: MWH PFC									
Perfluoro butanoic acid (PFBA)	ng/L	ND 50	ND 50	ND 50	ND 50	ND 50	ND 50	0.0%	0.0%
Perfluoro octanesulfonate (PFOS)	ng/L	ND 50	ND 50	ND 50	ND 50	ND 50	ND 50	0.0%	0.0%
Perfluoro octanoic acid (PFOA)	ng/L	ND 20	29	109	80	73	120	-265.0%	-10.1%
Analytical Method: SM 2320B									
Alkalinity as CaCO3	mg/l	190	190	160	170	180	200	5.3%	-25.0%
Bicarbonate Alkalinity as HCO3	mg/l	230	230	200	210	220	240	4.3%	-20.0%
Carbonate Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%

TABLE II-3-6: SJSC-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SJ/SC WPCP Source Influent				Soil Core SJSC-D Effluent		% Rem	% Rem
	Round	1st	1st (Dup)	2nd	2nd (Dup)	1st	2nd	1st	2nd
Parameter	Units								
Analytical Method: SM 2320B									
Hydroxide Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Analytical Method: SM 5310C									
Dissolved Organic Carbon	mg/l	6.8	7.0	5.9	6.0	37	6.3	-444.1%	-6.8%
Total Organic Carbon (TOC)	mg/l	6.9	6.9	6.1	6.0	50	6.4	-624.6%	-4.9%
Analytical Method: SM 9215B									
Heterotrophic Plate Count (HPC)	CFU/mL	2.0	6.0	41765	68090	Too High	ND 1	NA	100.0%
Analytical Method: SM 9221/9221B									
Total Coliform	MPN/100mL	ND 2	ND 2	9.0 (C)	4.0	ND 2	21	0.0%	-133.3%
Analytical Method: SM 9221/9221E									
Fecal Coliform	MPN/100mL	ND 2	ND 2	ND 2 (C)	ND 2	ND 2	4.0	0.0%	-100.0%
Analytical Method: SM 9221F/9223									
E. coli	MPN/100mL	ND 2	ND 2	Absent (C)	Absent	Absent	Absent	NA	NA
Total Coliform	MPN/100mL	NT	NT	326 (C)	411	106	1120	NA	-243.6%

Notes:

ND - denotes result was below the detection limit

NT - dentoes sample was not tested

Dup - denotes a field duplicate sample. A percent difference above 25% is indicative of a significant difference.

NA - denotes not available. For effluent results, this indicates there was inadequate volume to collect a sample. For % Rem, this indicates the value could not be calculated.

% Rem - is the percent concentration removal from influent to effluent of the given round and can be expresed as [(influent - effluent) / inluent]. Non detected values are treated at the reporting limit. A positive value is indicative of removal.

Nitrate and Nitrite not tested in the core effluent secound round because hold time of sample would have been significantly exceeded

All constituents that could be analayzed are listed in Table II-3-1. In some cases, there was not enough volume to analyze for all the constituents in Table II-3-1.

Flags:

C - The sample was analyzed beyond holding time

Q5 - Sample received with inadequate chemcial perservation, but perserved by the laboratory.

O-04 - This analysis was performed outside the EPA recommended holding time.

O-09 - This sample was received with the EPA recommended holding time expired.

TABLE II-3-7: SCRWA-B (semifine-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-B Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 160.1							
Total Dissolved Solids	mg/L	714 (C)	725	625	593	12.5%	18.2%
Analytical Method: EPA 1625mod							
N-Nitroso dimethylamine (NDMA)	ng/L	4.1	4.0	2.5	4.3	39.0%	-7.5%
Analytical Method: EPA 200.7							
Calcium	mg/l	46	54	110	51	-139.1%	5.6%
Magnesium	mg/l	27	32	71	32	-163.0%	0.0%
Potassium	mg/l	27	32	1.1	1.1	95.9%	96.6%
Sodium	mg/l	140	160	24	140	82.9%	12.5%
Total Boron	µg/L	360	430	400	400	-11.1%	7.0%
Analytical Method: EPA 300 mod							
EDTA	µg/L	232	266	121	ND 100	47.8%	62.4%
NTA	µg/L	ND 100	ND 100	ND 100	NT	0.0%	NA
Analytical Method: EPA 300.0							
Bromide	mg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloride	mg/l	230	220	210	200	8.7%	9.1%
Nitrate as N	mg/L	3.4	3.4	2.4 (O-09)	2.7 (O-04)	29.4%	20.6%
Nitrite as N	mg/L	ND 0.15	ND 0.15	0.23 (O-09)	ND 0.15 (O-04)	-53.3%	0.0%
Sulfate as SO4	mg/l	81	82	92	89	-13.6%	-8.5%
Analytical Method: EPA 314.0							
Perchlorate	µg/L	ND 4.0	ND 4.0	ND 4.0	ND 4.0	0.0%	0.0%
Analytical Method: EPA 335.4							
Total Cyanide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Analytical Method: EPA 365.3							
Phosphorus, Total as P	mg/l	3.9	4.6	0.32	ND 0.050	91.8%	98.9%
Analytical Method: EPA 425.1							
Surfactants (MBAS)	mg/L	0.060	ND 0.05	0.060	ND 0.05	0.0%	0.0%
Analytical Method: EPA 524.2							
1,1,1,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,1-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

TABLE II-3-7: SCRWA-B (semifine-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-B Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 524.2							
1,1-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3 Dichloropropene (Total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3,5-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Butanone	µg/L	ND 5.0	ND 5.0	ND 5.0	5.2	0.0%	-4.0%
2-Chloroethyl vinyl ether	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
2-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Hexanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
4-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
4-Methyl-2-pentanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Benzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromochloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromodichloromethane	µg/L	12	5.7	3.1	2.1	74.2%	63.2%
Bromoform	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Carbon tetrachloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroform	µg/L	40	21	16	9.1	60.0%	56.7%
Chloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
cis-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
cis-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

Locus TECHNOLOGIES

TABLE II-3-7: SCRWA-B (semifine-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-B Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 524.2							
Di-isopropyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Dibromochloromethane	µg/L	2.6	1.2	ND 0.50	ND 0.50	80.8%	58.3%
Dibromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Dichlorodifluoromethane (Freon 12)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Ethyl tert-butyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Ethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Freon 113	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Hexachlorobutadiene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Isopropylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
m,p-Xylene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
m-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Methyl tert-butyl ether (MTBE)	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Methylene chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
n-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
n-Propylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Naphthalene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Xylene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
p-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
p-Isopropyltoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
sec-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Styrene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tert-amyl methyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
tert-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tetrachloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Toluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
trans-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
trans-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichlorofluoromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Vinyl chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Xylenes (total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

TABLE II-3-7: SCRWA-B (semifine-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-B Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
2,4-Dinitrotoluene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
2,6-Dinitrotoluene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDD	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDE	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDT	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthylene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acetochlor	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Alachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Aldrin	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Alpha-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
alpha-Chlordane	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Anthracene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Atrazine	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benz(a)Anthracene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(a)pyrene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(b)Fluoranthene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(g,h,i)perylene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(k)Fluoranthene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Beta-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Bromacil	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Butachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
butylbenzylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Caffeine by method 525mod	µg/L	ND 0.02	ND 0.02	ND 0.02	0.50	0.0%	-2400.0%
Chlorobenzilate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chloroneb	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorothalonil(Draconil,Bravo)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorpyrifos (Dursban)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Chyrsene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Delta-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Di(2-Ethylhexyl)phthalate	µg/L	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%
Di-(2-Ethylhexyl)adipate	µg/L	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%

TABLE II-3-7: SCRWA-B (semifine-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-B Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
Di-n-Butylphthalate	µg/L	ND 1	ND 1	ND 1	ND 1	0.0%	0.0%
Di-N-octylphthalate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Diazinon (Qualitative)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dibenz(a,h)Anthracene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dichlorvos (DDVP)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dieldrin	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Diethylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Dimethoate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dimethylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Endosulfan I (Alpha)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan II (Beta)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan Sulfate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endrin Aldehyde	µg/L	ND 0.1	ND 0.1 (M2)	ND 0.1	ND 0.1	0.0%	0.0%
Endrin	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
EPTC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluoranthene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluorene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
gamma-Chlordane	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor Epoxide (isomer B)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	0.0%	0.0%
Hexachlorobenzene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Hexachlorocyclopentadiene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Indeno(1,2,3,c,d)Pyrene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Isophorone	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Lindane	µg/L	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Malathion	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Methoxychlor	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Metolachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
metribuzin	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Molinate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Naphthalene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Parathion	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%

TABLE II-3-7: SCRWA-B (semifine-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-B Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
Pendimethalin	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Pentachlorophenol	µg/L	ND 1 (L3)	ND 1	ND 1	ND 1	0.0%	0.0%
Permethrin (mixed isomers)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Phenanthrene	µg/L	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Propachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Pyrene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Simazine	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Terbacil	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Terbuthylazine	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Thiobencarb	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
trans-Nonachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Trifluralin	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Analytical Method: EPA 552.2							
Bromochloroacetic acid (bcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Dibromoacetic acid (dbaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Dichloroacetic acid (dcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Monobromoacetic acid (mbaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Monochloroacetic acid (mcaa)	µg/L	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Total HAA5	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Trichloroacetic acid (tcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Analytical Method: handheld instrument							
Dissolved Oxygen (DO)	mg/L	8.4	8.7	8.3	5.3	1.2%	39.1%
ORP	mV	217	230	172	123	20.7%	46.5%
pH		7.5	8.1	7.3	7.5	2.7%	7.4%
Residual Chlorine	mg/L	0.0	0.0	0.36	0.0	NA	NA
Analytical Method: MWH PFC							
Perfluoro butanoic acid (PFBA)	ng/L	ND 50	ND 50	ND 50	ND 50	0.0%	0.0%
Perfluoro octanesulfonate (PFOS)	ng/L	ND 50	ND 50	ND 50	ND 50	0.0%	0.0%
Perfluoro octanoic acid (PFOA)	ng/L	39	ND 20	77	82	-97.4%	-310.0%
Analytical Method: SM 2320B							
Alkalinity as CaCO3	mg/l	240	250	340	220	-41.7%	12.0%
Bicarbonate Alkalinity as HCO3	mg/l	290	300	410	270	-41.4%	10.0%

TABLE II-3-7: SCRWA-B (semifine-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-B Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: SM 2320B							
Carbonate Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Hydroxide Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Analytical Method: SM 5310C							
Dissolved Organic Carbon	mg/l	4.1	4.1	11	3.5	-168.3%	14.6%
Total Organic Carbon (TOC)	mg/l	4.2	4.0	23	4.3	-447.6%	-7.5%
Analytical Method: SM 9215B							
Heterotrophic Plate Count (HPC)	CFU/mL	24295	33635	Too High	56550	NA	-68.1%
Analytical Method: SM 9221							
Fecal Coliform	MPN/100mL	ND 2	ND 2	ND 2	ND 2	0.0%	0.0%
Total Coliform	MPN/100mL	ND 2	ND 2	ND 2	ND 2	0.0%	0.0%
Analytical Method: SM 9223							
E. coli	MPN/100mL	Absent	Absent	Absent	Absent	NA	NA
Total Coliform	MPN/100mL	2.0	4.1	Absent	Absent	NA	NA

Notes:

ND - denotes result was below the detection limit

NT - dentoes sample was not tested

NA - denotes not available. For effluent results, this indicates there was inadequate volume to collect a sample. For % Rem, this indicates the value could not be calculated.

% Rem - is the percent concentration removal from influent to effluent of the given round and can be expresed as [(influent - effluent) / inluent]. Non detected values are treated at the reporting limit. A positive value is indicative of removal.

All constituents that could be analayzed are listed in Table II-3-1. In some cases, there was not enough volume to analyze for all the constituents in Table II-3-1.

Flags:

C - The sample was analyzed beyond holding time

O-04 - This analysis was performed outside the EPA recommended holding time.

O-09 - This sample was received with the EPA recommended holding time expired.

M2 - Matrix spike reovery was low; the associated blank spike recovery was acceptable

L3 - The associated blank spike recovered was above method acceptance limits

TABLE II-3-8: SCRWA-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 160.1							
Total Dissolved Solids	mg/L	714 (C)	725	699 (C)	691	2.1%	4.7%
Analytical Method: EPA 1625mod							
N-Nitroso dimethylamine (NDMA)	ng/L	4.1	4.0	7.3	6.0	-78.0%	-50.0%
Analytical Method: EPA 200.7							
Calcium	mg/l	46	54	75	52	-63.0%	3.7%
Magnesium	mg/l	27	32	52	35	-92.6%	-9.4%
Potassium	mg/l	27	32	9.0	13	66.7%	59.4%
Sodium	mg/l	140	160	91	140	35.0%	12.5%
Total Boron	µg/L	360	430	350	360	2.8%	16.3%
Analytical Method: EPA 300 mod							
EDTA	µg/L	232	266	236	ND 100	-1.7%	62.4%
NTA	µg/L	ND 100	ND 100	ND 100	NT	0.0%	NA
Analytical Method: EPA 300.0							
Bromide	mg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloride	mg/l	230	220	210	210	8.7%	4.5%
Nitrate as N	mg/L	3.4	3.4	3.1 (O-09)	NT	8.8%	NA
Nitrite as N	mg/L	ND 0.15	ND 0.15	ND 0.15 (O-09)	NT	0.0%	NA
Sulfate as SO4	mg/l	81	82	89	92	-9.9%	-12.2%
Analytical Method: EPA 314.0							
Perchlorate	µg/L	ND 4.0	ND 4.0	ND 4.0	ND 4.0	0.0%	0.0%
Analytical Method: EPA 335.4							
Total Cyanide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Analytical Method: EPA 365.3							
Phosphorus, Total as P	mg/l	3.9	4.6	0.46	2.3	88.2%	50.0%
Analytical Method: EPA 425.1							
Surfactants (MBAS)	mg/L	0.060	ND 0.05	0.080	0.070	-33.3%	-40.0%
Analytical Method: EPA 524.2							
1,1,1,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,1-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

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TECHNOLOGIES

TABLE II-3-8: SCRWA-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 524.2							
1,1-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3 Dichloropropene (Total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3,5-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Butanone	µg/L	ND 5.0	ND 5.0	7300	9.6	-145900.0%	-92.0%
2-Chloroethyl vinyl ether	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
2-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Hexanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
4-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
4-Methyl-2-pentanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Benzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromochloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromodichloromethane	µg/L	12	5.7	5.0	4.9	58.3%	14.0%
Bromoform	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Carbon tetrachloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroform	µg/L	40	21	20	18	50.0%	14.3%
Chloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
cis-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
cis-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

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TABLE II-3-8: SCRWA-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 524.2							
Di-isopropyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Dibromochloromethane	µg/L	2.6	1.2	0.94	0.99	63.8%	17.5%
Dibromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Dichlorodifluoromethane (Freon 12)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Ethyl tert-butyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Ethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Freon 113	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Hexachlorobutadiene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Isopropylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
m,p-Xylene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
m-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Methyl tert-butyl ether (MTBE)	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Methylene chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
n-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
n-Propylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Naphthalene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Xylene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
p-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
p-Isopropyltoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
sec-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Styrene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tert-amyl methyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
tert-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tetrachloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Toluene	µg/L	ND 0.50	ND 0.50	0.50	ND 0.50	0.0%	0.0%
trans-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
trans-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichlorofluoromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Vinyl chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Xylenes (total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

TABLE II-3-8: SCRWA-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
2,4-Dinitrotoluene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
2,6-Dinitrotoluene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDD	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDE	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDT	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthylene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acetochlor	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Alachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Aldrin	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Alpha-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
alpha-Chlordane	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Anthracene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Atrazine	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benz(a)Anthracene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(a)pyrene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(b)Fluoranthene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(g,h,i)perylene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(k)Fluoranthene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Beta-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Bromacil	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Butachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
butylbenzylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Caffeine by method 525mod	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Chlorobenzilate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chloroneb	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorothalonil(Draconil,Bravo)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorpyrifos (Dursban)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Chyrsene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Delta-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Di(2-Ethylhexyl)phthalate	µg/L	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%
Di-(2-Ethylhexyl)adipate	µg/L	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%

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TECHNOLOGIES

TABLE II-3-8: SCRWA-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
Di-n-Butylphthalate	µg/L	ND 1	ND 1	ND 1	ND 1	0.0%	0.0%
Di-N-octylphthalate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Diazinon (Qualitative)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dibenz(a,h)Anthracene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dichlorvos (DDVP)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dieldrin	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Diethylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Dimethoate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dimethylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Endosulfan I (Alpha)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan II (Beta)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan Sulfate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endrin Aldehyde	µg/L	ND 0.1	ND 0.1 (M2)	ND 0.1	ND 0.1	0.0%	0.0%
Endrin	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
EPTC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluoranthene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluorene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
gamma-Chlordane	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor Epoxide (isomer B)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	0.0%	0.0%
Hexachlorobenzene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Hexachlorocyclopentadiene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Indeno(1,2,3,c,d)Pyrene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Isophorone	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Lindane	µg/L	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Malathion	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Methoxychlor	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Metolachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
metribuzin	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Molinate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Naphthalene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Parathion	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%

TABLE II-3-8: SCRWA-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
Pendimethalin	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Pentachlorophenol	µg/L	ND 1 (L3)	ND 1	ND 1	ND 1	0.0%	0.0%
Permethrin (mixed isomers)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Phenanthrene	µg/L	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Propachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Pyrene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Simazine	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Terbacil	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Terbuthylazine	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Thiobencarb	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
trans-Nonachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Trifluralin	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Analytical Method: EPA 552.2							
Bromochloroacetic acid (bcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Dibromoacetic acid (dbaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Dichloroacetic acid (dcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Monobromoacetic acid (mbaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Monochloroacetic acid (mcaa)	µg/L	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Total HAA5	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Trichloroacetic acid (tcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Analytical Method: handheld instrument							
Dissolved Oxygen (DO)	mg/L	8.4	8.7	8.5	8.3	-1.2%	4.6%
ORP	mV	217	230	167	164	23.0%	28.7%
pH		7.5	8.1	7.4	7.4	1.3%	8.6%
Residual Chlorine	mg/L	0.0	0.0	0.40	0.020	NA	NA
Analytical Method: MWH PFC							
Perfluoro butanoic acid (PFBA)	ng/L	ND 50	ND 50	ND 50	ND 50	0.0%	0.0%
Perfluoro octanesulfonate (PFOS)	ng/L	ND 50	ND 50	ND 50	ND 50	0.0%	0.0%
Perfluoro octanoic acid (PFOA)	ng/L	39	ND 20	108	80	-176.9%	-300.0%
Analytical Method: SM 2320B							
Alkalinity as CaCO3	mg/l	240	250	240	230	0.0%	8.0%
Bicarbonate Alkalinity as HCO3	mg/l	290	300	290	280	0.0%	6.7%

TABLE II-3-8: SCRWA-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: SM 2320B							
Carbonate Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Hydroxide Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Analytical Method: SM 5310C							
Dissolved Organic Carbon	mg/l	4.1	4.1	24	4.4	-485.4%	-7.3%
Total Organic Carbon (TOC)	mg/l	4.2	4.0	84	4.3	-1900.0%	-7.5%
Analytical Method: SM 9215B							
Heterotrophic Plate Count (HPC)	CFU/mL	24295	33635	Too High	1763500	NA	-5143.1%
Analytical Method: SM 9221							
Fecal Coliform	MPN/100mL	ND 2	ND 2	ND 2	ND 2	0.0%	0.0%
Total Coliform	MPN/100mL	ND 2	ND 2	ND 2	ND 2	0.0%	0.0%
Analytical Method: SM 9223							
E. coli	MPN/100mL	Absent	Absent	Absent	Absent	NA	NA
Total Coliform	MPN/100mL	2.0	4.1	4.1	Absent	-105.0%	NA

Notes:

ND - denotes result was below the detection limit

NT - dentoes sample was not tested

NA - denotes not available. For effluent results, this indicates there was inadequate volume to collect a sample. For % Rem, this indicates the value could not be calculated.

% Rem - is the percent concentration removal from influent to effluent of the given round and can be expresed as [(influent - effluent) / inluent]. Non detected values are treated at the reporting limit. A positive value is indicative of removal.

Nitrate and Nitrite not tested in the core effluent secound round because hold time of sample would have been significantly exceeded

All constituents that could be analayzed are listed in Table II-3-1. In some cases, there was not enough volume to analyze for all the constituents in Table II-3-1.

Flags:

C - The sample was analyzed beyond holding time

O-09 - This sample was received with the EPA recommended holding time expired.

M2 - Matrix spike reovery was low; the associated blank spike recovery was acceptable

L3 - The associated blank spike recovered was above method acceptance limits

TABLE II-3-9: SCRWA-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-D Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 160.1							
Total Dissolved Solids	mg/L	714 (C)	725	768 (C)	585	-7.6%	19.3%
Analytical Method: EPA 1625mod							
N-Nitroso dimethylamine (NDMA)	ng/L	4.1	4.0	ND 2	5.4	51.2%	-35.0%
Analytical Method: EPA 200.7							
Calcium	mg/l	46	54	62	55	-34.8%	-1.9%
Magnesium	mg/l	27	32	34	31	-25.9%	3.1%
Potassium	mg/l	27	32	24	24	11.1%	25.0%
Sodium	mg/l	140	160	140	140	0.0%	12.5%
Total Boron	µg/L	360	430	380	370	-5.6%	14.0%
Analytical Method: EPA 300 mod							
EDTA	µg/L	232	266	242	237	-4.3%	10.9%
NTA	µg/L	ND 100	ND 100	ND 100	NT	0.0%	NA
Analytical Method: EPA 300.0							
Bromide	mg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloride	mg/l	230	220	210	210	8.7%	4.5%
Nitrate as N	mg/L	3.4	3.4	ND 0.11 (O-09)	NT*	96.8%	NA
Nitrite as N	mg/L	ND 0.15	ND 0.15	ND 0.15 (O-09)	NT*	0.0%	NA
Sulfate as SO4	mg/l	81	82	130	95	-60.5%	-15.9%
Analytical Method: EPA 314.0							
Perchlorate	µg/L	ND 4.0	ND 4.0	ND 4.0	ND 4.0	0.0%	0.0%
Analytical Method: EPA 335.4							
Total Cyanide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Analytical Method: EPA 365.3							
Phosphorus, Total as P	mg/l	3.9	4.6	2.9	18	25.6%	-291.3%
Analytical Method: EPA 425.1							
Surfactants (MBAS)	mg/L	0.060	ND 0.05	0.080	0.070	-33.3%	-40.0%
Analytical Method: EPA 524.2							
1,1,1,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,1-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

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TABLE II-3-9: SCRWA-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-D Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 524.2							
1,1-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3 Dichloropropene (Total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3,5-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Butanone	µg/L	ND 5.0	ND 5.0	180000	ND 5.0	-3599900.0%	0.0%
2-Chloroethyl vinyl ether	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
2-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Hexanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
4-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
4-Methyl-2-pentanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Benzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromochloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromodichloromethane	µg/L	12	5.7	1.6	3.1	86.7%	45.6%
Bromoform	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Carbon tetrachloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroform	µg/L	40	21	6.0	14	85.0%	33.3%
Chloromethane	µg/L	ND 0.50	ND 0.50	0.67	ND 0.50	-34.0%	0.0%
cis-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
cis-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

TABLE II-3-9: SCRWA-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-D Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 524.2							
Di-isopropyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Dibromochloromethane	µg/L	2.6	1.2	ND 0.50	0.59	80.8%	50.8%
Dibromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Dichlorodifluoromethane (Freon 12)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Ethyl tert-butyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Ethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Freon 113	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Hexachlorobutadiene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Isopropylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
m,p-Xylene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
m-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Methyl tert-butyl ether (MTBE)	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Methylene chloride	µg/L	ND 0.50	ND 0.50	0.78	ND 0.50	-56.0%	0.0%
n-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
n-Propylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Naphthalene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Xylene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
p-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
p-Isopropyltoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
sec-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Styrene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tert-amyl methyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
tert-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tetrachloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Toluene	µg/L	ND 0.50	ND 0.50	0.82	ND 0.50	-64.0%	0.0%
trans-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
trans-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichlorofluoromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Vinyl chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Xylenes (total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

TABLE II-3-9: SCRWA-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-D Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
2,4-Dinitrotoluene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
2,6-Dinitrotoluene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDD	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDE	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDT	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthylene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acetochlor	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Alachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Aldrin	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Alpha-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
alpha-Chlordane	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Anthracene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Atrazine	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benz(a)Anthracene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(a)pyrene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(b)Fluoranthene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(g,h,i)perylene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(k)Fluoranthene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Beta-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Bromacil	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Butachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
butylbenzylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Caffeine by method 525mod	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Chlorobenzilate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chloroneb	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorothalonil(Draconil,Bravo)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorpyrifos (Dursban)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Chyrsene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Delta-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Di(2-Ethylhexyl)phthalate	µg/L	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%
Di-(2-Ethylhexyl)adipate	µg/L	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%

TABLE II-3-9: SCRWA-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-D Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
Di-n-Butylphthalate	µg/L	ND 1	ND 1	ND 1	ND 1	0.0%	0.0%
Di-N-octylphthalate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Diazinon (Qualitative)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dibenz(a,h)Anthracene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dichlorvos (DDVP)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dieldrin	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Diethylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Dimethoate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dimethylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Endosulfan I (Alpha)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan II (Beta)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan Sulfate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endrin Aldehyde	µg/L	ND 0.1	ND 0.1 (M2)	ND 0.1	ND 0.1	0.0%	0.0%
Endrin	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
EPTC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluoranthene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluorene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
gamma-Chlordane	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor Epoxide (isomer B)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	0.0%	0.0%
Hexachlorobenzene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Hexachlorocyclopentadiene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Indeno(1,2,3,c,d)Pyrene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Isophorone	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Lindane	µg/L	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Malathion	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Methoxychlor	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Metolachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
metribuzin	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Molinate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Naphthalene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Parathion	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%

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TABLE II-3-9: SCRWA-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	SCRWA Source Influent		Soil Core SCRWA-D Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
Pendimethalin	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Pentachlorophenol	µg/L	ND 1 (L3)	ND 1	ND 1	ND 1	0.0%	0.0%
Permethrin (mixed isomers)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Phenanthrene	µg/L	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Propachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Pyrene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Simazine	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Terbacil	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Terbuthylazine	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Thiobencarb	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
trans-Nonachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Trifluralin	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Analytical Method: EPA 552.2							
Bromochloroacetic acid (bcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Dibromoacetic acid (dbaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Dichloroacetic acid (dcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Monobromoacetic acid (mbaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Monochloroacetic acid (mcaa)	µg/L	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Total HAA5	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Trichloroacetic acid (tcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Analytical Method: handheld instrument							
Dissolved Oxygen (DO)	mg/L	8.4	8.7	8.5	8.4	-1.2%	3.4%
ORP	mV	217	230	151	134	30.4%	41.7%
pH		7.5	8.1	7.9	7.8	-5.3%	3.7%
Residual Chlorine	mg/L	0.0	0.0	1.4	0.0	NA	NA
Analytical Method: MWH PFC							
Perfluoro butanoic acid (PFBA)	ng/L	ND 50	ND 50	ND 50	ND 50	0.0%	0.0%
Perfluoro octanesulfonate (PFOS)	ng/L	ND 50	ND 50	ND 50	ND 50	0.0%	0.0%
Perfluoro octanoic acid (PFOA)	ng/L	39	ND 20	99	120	-153.8%	-500.0%
Analytical Method: SM 2320B							
Alkalinity as CaCO3	mg/l	240	250	240	240	0.0%	4.0%
Bicarbonate Alkalinity as HCO3	mg/l	290	300	290	290	0.0%	3.3%

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TABLE II-3-9: SCRWA-D (fine-grained with gypsum)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

Parameter	Sample ID Round Units	SCRWA Source Influent 1st	SCRWA Source Influent 2nd	Soil Core SCRWA-D Effluent 1st	Soil Core SCRWA-D Effluent 2nd	% Rem 1st	% Rem 2nd
Analytical Method: SM 2320B							
Carbonate Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Hydroxide Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Analytical Method: SM 5310C							
Dissolved Organic Carbon	mg/l	4.1	4.1	16	4.3	-290.2%	-4.9%
Total Organic Carbon (TOC)	mg/l	4.2	4.0	35	4.9	-733.3%	-22.5%
Analytical Method: SM 9215B							
Heterotrophic Plate Count (HPC)	CFU/mL	24295	33635	Too High	308000	NA	-815.7%
Analytical Method: SM 9221							
Fecal Coliform	MPN/100mL	ND 2	ND 2	ND 2	ND 2	0.0%	0.0%
Total Coliform	MPN/100mL	ND 2	ND 2	7.0	2.0	-250.0%	0.0%
Analytical Method: SM 9223							
E. coli	MPN/100mL	Absent	Absent	Absent	Absent	NA	NA
Total Coliform	MPN/100mL	2.0	4.1	19	Absent	-850.0%	NA

Notes:

ND - denotes result was below the detection limit
NT - dentoes sample was not tested
NA - denotes not available. For effluent results, this indicates there was inadequate volume to collect a sample. For % Rem, this indicates the value could not be calculated.
% Rem - is the percent concentration removal from influent to effluent of the given round and can be expresed as [(influent - effluent) / inluent]. Non detected values are treated at the reporting limit. A positive value is indicative of removal.
Nitrate and Nitrite not tested in the core effluent secound round because hold time of sample would have been significantly exceeded
All constituents that could be analayzed are listed in Table II-3-1. In some cases, there was not enough volume to analyze for all the constituents in Table II-3-1.

Flags:

C - The sample was analyzed beyond holding time
O-09 - This sample was received with the EPA recommended holding time expired.
M2 - Matrix spike reovery was low; the associated blank spike recovery was acceptable
L3 - The associated blank spike recovered was above method acceptance limits

TABLE II-3-10: DI-A (fine-grained)
ANALYTICAL DATA
BENCH SCALE TEST
RECYCLED WATER STUDY

Parameter	Field Sample ID Round Units	DI Source Influent 1st	DI Source Influent 2nd	Soil Core DI-A Effluent 1st	Soil Core DI-A Effluent 2nd	% Rem 1st
Analytical Method: handheld instrument						
Dissolved Oxygen (DO)	mg/L	8.3	8.6	8.1	NA	2.4%
ORP	mV	245	297	132	NA	46.1%
pH		6.5	7.0	7.9	NA	-21.5%
Residual Chlorine	mg/L	0.0	0.0	1.7	NA	NA

Notes:

NA - denotes not available. For effluent results, this indicates there was inadequate volume to collect a sample. For % Rem, this indicates the value could not be calculated.

% Rem - is the percent concentration removal from influent to effluent of the given round and can be expresed as [(influent - effluent) / inluent]. Non detected values are treated at the reporting limit. A positive value is indicative of removal.

All constituents that could be analayzed are listed in Table II-3-1. In some cases, there was not enough volume to analyze for all the constituents in Table II-3-1.

TABLE II-3-11: DI-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	DI Source Influent		Soil Core DI-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 160.1							
Total Dissolved Solids	mg/L	ND 10	ND 10	964 (C)	1360	-9540.0%	-13500.0%
Analytical Method: EPA 1625mod							
N-Nitroso dimethylamine (NDMA)	ng/L	4.0	8.7	8.6	7.8	-115.0%	10.3%
Analytical Method: EPA 200.7							
Calcium	mg/l	ND 0.10	ND 0.10	64	150	-63900.0%	-149900.0%
Magnesium	mg/l	ND 0.10	ND 0.10	34	40	-33900.0%	-39900.0%
Potassium	mg/l	0.29	ND 0.10	1.7	0.98	-486.2%	-880.0%
Sodium	mg/l	ND 0.50	ND 0.50	150	14	-29900.0%	-2700.0%
Total Boron	µg/L	ND 10	ND 10	66	16	-560.0%	-60.0%
Analytical Method: EPA 300 mod							
EDTA	µg/L	ND 100	100	ND 100	ND 100	0.0%	0.0%
NTA	µg/L	ND 100	ND 100	ND 100	NT	0.0%	NA
Analytical Method: EPA 300.0							
Bromide	mg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloride	mg/l	ND 0.50	ND 0.50	450	230	-89900.0%	-45900.0%
Nitrate as N	mg/L	ND 0.11	ND 0.11	ND 0.11 (O-09)	NT	0.0%	NA
Nitrite as N	mg/L	ND 0.15	ND 0.15	ND 0.15 (O-09)	NT	0.0%	NA
Sulfate as SO4	mg/l	ND 0.50	ND 0.50	5.3	3.0	-960.0%	-500.0%
Analytical Method: EPA 314.0							
Perchlorate	µg/L	ND 4.0	ND 4.0	ND 4.0	ND 4.0	0.0%	0.0%
Analytical Method: EPA 335.4							
Total Cyanide	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Analytical Method: EPA 365.3							
Phosphorus, Total as P	mg/l	ND 0.050	ND 0.050	0.42	0.48	-740.0%	-860.0%
Analytical Method: EPA 425.1							
Surfactants (MBAS)	mg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Analytical Method: EPA 524.2							
1,1,1,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,1-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2,2-Tetrachloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1,2-Trichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

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TABLE II-3-11: DI-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	DI Source Influent		Soil Core DI-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 524.2							
1,1-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,1-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,3-Trichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2,4-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3 Dichloropropene (Total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3,5-Trimethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
1,3-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2,2-Dichloropropane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Butanone	µg/L	ND 5.0	16	6400	160	-127900.0%	-900.0%
2-Chloroethyl vinyl ether	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
2-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
2-Hexanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
4-Chlorotoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
4-Methyl-2-pentanone	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Benzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromochloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromodichloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromoform	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Bromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Carbon tetrachloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Chloroform	µg/L	ND 0.50	ND 0.50	0.84	0.77	-68.0%	-54.0%
Chloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
cis-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
cis-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

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TABLE II-3-11: DI-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

Parameter	Sample ID Round Units	DI Source Influent 1st	DI Source Influent 2nd	Soil Core DI-C Effluent 1st	Soil Core DI-C Effluent 2nd	% Rem 1st	% Rem 2nd
Analytical Method: EPA 524.2							
Di-isopropyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Dibromochloromethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Dibromomethane	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Dichlorodifluoromethane (Freon 12)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Ethyl tert-butyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Ethylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Freon 113	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Hexachlorobutadiene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Isopropylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
m,p-Xylene	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
m-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Methyl tert-butyl ether (MTBE)	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
Methylene chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
n-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
n-Propylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Naphthalene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
o-Xylene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
p-Dichlorobenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
p-Isopropyltoluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
sec-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Styrene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tert-amyl methyl ether	µg/L	ND 3.0	ND 3.0	ND 3.0	ND 3.0	0.0%	0.0%
tert-Butylbenzene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Tetrachloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Toluene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
trans-1,2-Dichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
trans-1,3-Dichloropropene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichloroethene	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Trichlorofluoromethane	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Vinyl chloride	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%
Xylenes (total)	µg/L	ND 0.50	ND 0.50	ND 0.50	ND 0.50	0.0%	0.0%

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TABLE II-3-11: DI-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	DI Source Influent		Soil Core DI-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
2,4-Dinitrotoluene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
2,6-Dinitrotoluene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDD	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDE	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
4,4'-DDT	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acenaphthylene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Acetochlor	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Alachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Aldrin	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Alpha-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
alpha-Chlordane	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Anthracene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Atrazine	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benz(a)Anthracene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(a)pyrene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(b)Fluoranthene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Benzo(g,h,i)perylene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Benzo(k)Fluoranthene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Beta-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Bromacil	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Butachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
butylbenzylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Caffeine by method 525mod	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Chlorobenzilate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chloroneb	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorothalonil(Draconil,Bravo)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Chlorpyrifos (Dursban)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Chyrsene	µg/L	ND 0.02	ND 0.02	ND 0.02	ND 0.02	0.0%	0.0%
Delta-BHC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Di(2-Ethylhexyl)phthalate	µg/L	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%
Di-(2-Ethylhexyl)adipate	µg/L	ND 0.6	ND 0.6	ND 0.6	ND 0.6	0.0%	0.0%

TABLE II-3-11: DI-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	DI Source Influent		Soil Core DI-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
Di-n-Butylphthalate	µg/L	ND 1	ND 1	ND 1	ND 1	0.0%	0.0%
Di-N-octylphthalate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Diazinon (Qualitative)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dibenz(a,h)Anthracene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dichlorvos (DDVP)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Dieldrin	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
Diethylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	0.60	0.0%	-20.0%
Dimethoate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Dimethylphthalate	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Endosulfan I (Alpha)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan II (Beta)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endosulfan Sulfate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endrin Aldehyde	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Endrin	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
EPTC	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluoranthene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Fluorene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
gamma-Chlordane	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor Epoxide (isomer B)	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Heptachlor	µg/L	ND 0.03	ND 0.03	ND 0.03	ND 0.03	0.0%	0.0%
Hexachlorobenzene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Hexachlorocyclopentadiene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Indeno(1,2,3,c,d)Pyrene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Isophorone	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.0%	0.0%
Lindane	µg/L	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Malathion	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Methoxychlor	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Metolachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
metribuzin	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Molinate	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Naphthalene	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Parathion	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%

TABLE II-3-11: DI-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

	Sample ID	DI Source Influent		Soil Core DI-C Effluent		% Rem	% Rem
	Round	1st	2nd	1st	2nd	1st	2nd
Parameter	Units						
Analytical Method: EPA 525.2							
Pendimethalin	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Pentachlorophenol	µg/L	ND 1 (L3)	ND 1	ND 1	ND 1	0.0%	0.0%
Permethrin (mixed isomers)	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Phenanthrene	µg/L	ND 0.04	ND 0.04	ND 0.04	ND 0.04	0.0%	0.0%
Propachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Pyrene	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Simazine	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Terbacil	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Terbuthylazine	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Thiobencarb	µg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.0%	0.0%
trans-Nonachlor	µg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.0%	0.0%
Trifluralin	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.0%	0.0%
Analytical Method: EPA 552.2							
Bromochloroacetic acid (bcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Dibromoacetic acid (dbaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Dichloroacetic acid (dcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Monobromoacetic acid (mbaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Monochloroacetic acid (mcaa)	µg/L	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Total HAA5	µg/L	ND 5.0	ND 5.0	ND 5.0	ND 5.0	0.0%	0.0%
Trichloroacetic acid (tcaa)	µg/L	ND 1.0	ND 1.0	ND 1.0	ND 1.0	0.0%	0.0%
Analytical Method: handheld instrument							
Dissolved Oxygen (DO)	mg/L	8.3	8.6	8.7	4.2	-4.8%	51.2%
ORP	mV	245	297	156	195	36.3%	34.3%
pH		6.5	7.0	7.4	7.3	-13.8%	-4.3%
Residual Chlorine	mg/L	0.0	0.0	1.9	1.3	NA	NA
Analytical Method: MWH PFC							
Perfluoro butanoic acid (PFBA)	ng/L	NT	ND 50	ND 50	ND 50	NA	0.0%
Perfluoro octanesulfonate (PFOS)	ng/L	NT	ND 50	ND 50	ND 50	NA	0.0%
Perfluoro octanoic acid (PFOA)	ng/L	NT	88	ND 20	ND 20	NA	77.3%
Analytical Method: SM 2320B							
Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	32	9.5	-1500.0%	-375.0%
Bicarbonate Alkalinity as HCO3	mg/l	ND 2.0	ND 2.0	39	12	-1850.0%	-500.0%

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TABLE II-3-11: DI-C (coarse-grained)
BENCH TEST: ANALYTICAL DATA
SANTA CLARA VALLEY WATER DISTRICT
RECYCLED WATER STUDY

Parameter	Sample ID Round Units	DI Source Influent 1st	DI Source Influent 2nd	Soil Core DI-C Effluent 1st	Soil Core DI-C Effluent 2nd	% Rem 1st	% Rem 2nd
Analytical Method: SM 2320B							
Carbonate Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Hydroxide Alkalinity as CaCO3	mg/l	ND 2.0	ND 2.0	ND 2.0	ND 2.0	0.0%	0.0%
Analytical Method: SM 5310C							
Dissolved Organic Carbon	mg/l	ND 0.30	ND 0.30	13	0.53	-4233.3%	-76.7%
Total Organic Carbon (TOC)	mg/l	ND 0.30	ND 0.30	44	0.68	-14566.7%	-126.7%
Analytical Method: SM 9215B							
Heterotrophic Plate Count (HPC)	CFU/mL	16495	935	Too High	30200	NA	-3129.9%
Analytical Method: SM 9221							
Fecal Coliform	MPN/100mL	ND 2	ND 2	ND 2	ND 2	0.0%	0.0%
Total Coliform	MPN/100mL	ND 2	ND 2	ND 2	4.0	0.0%	-100.0%
Analytical Method: SM 9223							
E. coli	MPN/100mL	Absent	Absent	Absent	Absent	NA	NA
Total Coliform	MPN/100mL	Absent	Absent	238	2419	NA	NA

Notes:

ND - denotes result was below the detection limit

NT - dentoes sample was not tested

NA - denotes not available. For effluent results, this indicates there was inadequate volume to collect a sample. For % Rem, this indicates the value could not be calculated.

% Rem - is the percent concentration removal from influent to effluent of the given round and can be expresed as [(influent - effluent) / inluent]. Non detected values are treated at the reporting limit. A positive value is indicative of removal.

Nitrate and Nitrite not tested in the core effluent secound round because hold time of sample would have been significantly exceeded

PFCs not tested in the DI influent sample in the first round because sample was lost in transit to laboratory

All constituents that could be analayzed are listed in Table II-3-1. In some cases, there was not enough volume to analyze for all the constituents in Table II-3-1.

Flags:

C - The sample was analyzed beyond holding time

O-09 - This sample was received with the EPA recommended holding time expired.

L3 - The associated blank spike recovered was above method acceptance limits

TABLE II-3-12
SODIUM ADSORPTION RATIO

		Influent				Effluent				
		Calcium	Sodium	Magnesium		Calcium	Sodium	Magnesium		
Location	Event	mg/L	mg/L	mg/L	SAR	mg/L	mg/L	mg/L	SAR	% Change SAR
SJSC-C	First	54	130	30	3.5	57	130	26	3.6	1.8
SJSC-C	Second	50	140	27	4.0	57	120	26	3.3	-16.6
SJSC-D	First	54	130	30	3.5	30	130	41	3.6	3.0
SJSC-D	Second	50	130	27	3.7	27	128	32	3.9	7.2
SCRWA-B	First	46	140	27	4.1	110	24	71	0.4	-89.2
SCRWA-B	Second	54	160	32	4.3	51	140	32	3.8	-11.2
SCRWA-C	First	46	140	27	4.1	75	91	52	2.0	-51.2
SCRWA-C	Second	54	160	32	4.3	52	140	35	3.7	-13.7
SCRWA-D	First	46	140	27	4.1	62	140	34	3.5	-12.4
SCRWA-D	Second	54	160	32	4.3	55	140	31	3.7	-12.2
DI-C	First	ND 0.10	ND 0.50	ND 0.10	N/A	64	140	34	3.5	N/A
DI-C	Second	ND 0.10	ND 0.50	ND 0.10	N/A	150	14	40	0.3	N/A

Notes:

A positive change in SAR indicates an exchange of sodium ions for calcium and magnesium ions in the soil matrix which results in clay shrinkage (increased hydraulic conductivity).

A negative change in SAR indicates an exchange of calcium and magnesium ions for sodium ions in the soil matrix which results in clay expansion (reduced hydraulic conductivity).

Volume III
San Jose Pilot Study

Recycled Water Irrigation and Groundwater Study
Santa Clara and Llagas Groundwater Subbasins
Santa Clara County, California

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TABLE OF CONTENTS

LIST OF FIGURES .... **III-iv**
LIST OF TABLES .... **III-vi**
LIST OF APPENDICES .... **III-vii**
LIST OF ACRONYMS AND ABBREVIATIONS .... **III-viii**
EXECUTIVE SUMMARY **III-ES-1**

1. INTRODUCTION **1**
  1.1. Purpose 1

2. SITE BACKGROUND **3**
  2.1. Irrigation 3
    2.1.1. Irrigation System 3
    2.1.2. Recycled Source Water 3
  2.2. Vadose Zone 4
    2.2.1. Soil Composition 4
    2.2.2. Lysimeters 5
      2.2.2.1. Lysimeters L1-5 and L1-10 5
      2.2.2.2. Lysimeters L2-5 and L2-10 6
      2.2.2.3. Lysimeters L3-5 and L3-10 6
      2.2.2.4. Lysimeters L4-5 and L4-10 6
      2.2.2.5. Lysimeter Composites 6
  2.3. Groundwater 7
    2.3.1. Existing Monitoring Wells 7
  2.4. Landscape Additives 8

3. METHODOLOGY **9**
  3.1. Analytes 9
  3.2. Analytical Laboratories 10
  3.3. Data Evaluation 10
    3.3.1. Mann-Kendall Trend Analysis 10
    3.3.2. Quality Assurance/Quality Control 11
  3.4. Sampling Frequency 12
    3.4.1. Baseline Sampling Event 12
    3.4.2. Subsequent Sampling Events 12
    3.4.3. Sample Extraction for Lysimeters 13
  3.5. Sampling Protocol 14
    3.5.1. Monitoring Well Sampling 14
    3.5.2. Lysimeter Sampling 15

3.5.3. Recycled Water Source Sampling 15
3.5.4. Quality Control Samples 15
3.5.5. Documentation 16

4. RESULTS 17
4.1. Chemical Results 17
4.1.1.1. pH and Alkalinity 18
4.1.1.2. Total Dissolved Solids 20
4.1.1.3. Dissolved and Total Organic Carbon 20
4.1.1.4. Redox Potential and Dissolved Oxygen 22
4.1.1.5. Total Chlorine 23
4.1.2. Anions and Cations 23
4.1.2.1. Chloride 23
4.1.2.2. Sulfate 24
4.1.2.3. Bromide 25
4.1.2.4. Cyanide 26
4.1.2.5. Boron 27
4.1.2.6. Potassium 27
4.1.2.7. Sodium Adsorption Ratio 28
4.1.2.8. Calcium 29
4.1.2.9. Magnesium 30
4.1.2.10. Sodium 31
4.1.3. Nutrients 32
4.1.3.1. Phosphate- Total as P 32
4.1.3.2. Nitrate and Nitrite 33
4.1.4. Anthropogenic Compounds 34
4.1.4.1. Trihalomethanes (THMs) 34
4.1.4.2. Volatile Organic Carbons (VOCs) 36
4.1.4.3. Haloacetic Acids (HAA6) 36
4.1.4.4. N-Nitrosodimethylamine (NDMA) 39
4.1.4.5. Terbuthylazine 41
4.1.4.6. Perfluorochemicals (PFCs) 41
4.1.4.7. NTA and EDTA 43
4.1.4.8. Surfactants 44
4.1.4.9. Perchlorate 45
4.1.5. Pathogens 45
4.2. Quality Assurance/Quality Control 48
4.2.1. Field Duplicates 48
4.2.2. Trip Blanks 50
4.2.3. Rinseate Blanks 50
4.2.4. Flags 51

4.2.4.1. "B" 51
4.2.4.2. "BB"..51
4.2.4.3. "BD" and "L3" 51
4.2.4.4. "D" 52
4.2.4.5. "J" 52
4.2.4.6. "P"..52
4.2.4.7. "R4" 52
4.2.4.8. "S7"..53
4.2.4.9. "T"..53
4.3. Water Budget of Recycled Water to Vadose Zone..53
4.4. Piper Diagram Analysis..54
4.5. Conclusions..55
4.5.1. Constituent Attenuation..55
4.5.2. Potential for Reduction in Soil Drainage Caused by Soil Aquifer Plugging............60

5. CONCLUSIONS.. 61
5.1. Limitations of the Pilot Study..61
5.1.1. Duration and Scale..61
5.1.2. Site Characteristics 61
5.1.3. Recycled Water Source..62
5.2. Comparison to Previous Phases of the Study 62
5.2.1. Soil Attenuation Model..62
5.2.2. Bench Test 63
5.3. Summary of Potential Threat to Groundwater..64

REFERENCES 67

FIGURES
TABLES
APPENDICES

LIST OF FIGURES

FIGURE NO.	TITLE
III-2-1	Sample Locations
III-2-2	IDT Irrigation
III-4-1	pH
III-4-2	Alkalinity as CaCO3
III-4-3	Bicarbonate Alkalinity as HCO3
III-4-4	Total Dissolved Solids
III-4-5	Dissolved Organic Carbon (DOC)
III-4-6	Total Organic Carbon (TOC)
III-4-7	ORP
III-4-8	Dissolved Oxygen (DO)
III-4-9	Chlorine, Total
III-4-10	Chloride
III-4-11	Sulfate as SO4
III-4-12	Bromide
III-4-13	Total Cyanide
III-4-14	Total Boron
III-4-15	Potassium
III-4-16	Calcium
III-4-17	Magnesium
III-4-18	Sodium
III-4-19	Sodium Adsorption Ratio
III-4-20	Phosphorus, Total as P
III-4-21	Nitrate as N
III-4-22	Nitrite as N
III-4-23	Bromodichloromethane

III-4-24 Bromoform
III-4-25 Chloroform
III-4-26 Dibromochloromethane
III-4-27 Carbon Tetrachloride
III-4-28 Xylenes-m,p
III-4-29 Xylenes-o
III-4-30 Bromochloroacetic acid (BCAA)
III-4-31 Dibromoacetic acid (DBAA)
III-4-32 Dichloroacetic acid (DCAA)
III-4-33 Monobromoacetic acid (MBAA)
III-4-34 Monochloroacetic acid (MCAA)
III-4-35 Trichloroacetic acid (TCAA)
III-4-36 N-Nitroso dimethylamine (NDMA)
III-4-37 Terbuthylazine
III-4-38 Perfluoro butanoic acid (PFBA)
III-4-39 Perfluoro octanesulfonate (PFOS)
III-4-40 Perfluoro octanoic acid (PFOA)
III-4-41 NTA
III-4-42 EDTA
III-4-43 Surfactants (MBAS)
III-4-44 Perchlorate
III-4-45 Heterotrophic Plate Count (HPC)
III-4-46 Total Coliform
III-4-47 Fecal Coliform
III-4-48 E. Coli
III-4-49 Piper Diagram Analysis

LIST OF TABLES

TABLE NO.	TITLE
III-3-1	Constituents of Concern
III-3-2	Summary of Pilot Study Events
III-4-1	Analytical Data
III-4-2	Legend of Qualifiers
III-4-3	QA/QC Analytical Data
III-4-4	Mann-Kendall Trend Analysis

LIST OF APPENDICES

APPENDIX NO.	TITLE
III-A	Soil Boring Logs
III-B	Landscape Additives
III-C	Sample Logs and Chains of Custodies
III-D	Recharge Logs
III-E	Lab Reports for Analyses of Constituents

LIST OF ACRONYMS AND ABBREVIATIONS

ACRONYM	DESCRIPTION
BCAA	bromochloroacetic acid
bgs	below ground surface
ccf	Hundred cubic feet
CDPH	California Department of Public Health
CFU	colony forming units
cm/sec	centimeter per second
COC	chains of custody
CT	contact time
DO	dissolved oxygen
DOC	dissolved organic carbon
DBAA	dibromoacetic acid
DCAA	dichloroacetic acid
EDTA	Ethylenediaminetetraacetic acid
HAA6	group of six haloacetic acids (DBAA, DCAA, MBAA, MCAA, TCAA, BCAA)
HPC	heterotrophic plate count
IDT	Integrated Device Technology
Locus	Locus Technologies
MBAA	monobromoacetic acid
MBAS	methylene blue active substances, also known as surfactants
MCAA	monochloroacetic acid
mg/L	milligrams per liter
mL	Milliliter
MPN	most propable number
MRL	method reporting limit
MS	matrix spike
MSD	matrix spike duplicate

LIST OF ACRONYMS AND ABBREVIATIONS

mV	millivolts
NDMA	N-nitrosodimethylamine
NTA	nitrilotriacetic acid
ng/L	nanograms per liter
ORP	oxidation reduction potential
PARWQCP	Palo Alto Regional Water Quality Control Plant
PFBA	perfluoro butanoic acid
PFCs	Perfluorochemicals
PFOA	perfluoro octanoic acid
PFOS	perfluoro octanesulfonate
QA/QC	Quality assurance and quality control
RPD	relative percent difference
S	Mann-Kendall Statistic
SAR	Sodium Adsorption Ratio
SCRWA	South County Regional Wastewater Authority
SCVWD	Santa Clara Valley Water District
SJ/SC WPCP	San Jose/Santa Clara Water Pollution Control Plant
SWPCP	Sunnyvale Water Pollution Control Plant
TCAA	trichloroacetic acid
TDS	total dissolved solids
THMs	Trihalomethanes
TOC	total organic carbon
TDS	total dissolved solids
µg/L	micrograms per liter
USCS	Unified soil classification system
VOC	Volatile organic carbon

EXECUTIVE SUMMARY

Volume III covers the third phase of the Recycled Water Irrigation and Groundwater Study. The overall goal of the study is to evaluate the potential impact to groundwater from expanded use of recycled water for irrigation in the Santa Clara and Llagas Subbasins. The scope of this volume is a pilot study of the potential impacts from irrigating with recycled water on vadose zone pore water and groundwater at a commercial facility in San Jose.

Description of Site and Monitoring Program

The pilot study was a full-scale test for observing the subsurface fate and transport of recycled water under real conditions for irrigation. The pilot study was conducted at the Integrated Device Technology (IDT) site located at 6024 Silver Creek Valley Road, San Jose, California (Figure III-2-1). The focus of the study is to determine if any constituents found in recycled water could potentially have a negative impact on groundwater when recycled water is used as a water source for irrigation.

The monitoring program for the pilot study included eight lysimeters and four exisitng monitoring wells. The four monitoring wells were used to monitor groundwater constituent concentrations in the shallowest saturated zone, a depth of approximately 30 feet below ground surface (bgs). The eight lysimeters consisted of four installed at five feet depth and four installed at ten feet depth. These lysimeters monitor the pore water in the vadose zone. Due to the high volume requirement for sampling and limited volume capacity in each lysimeter, samples from the four 5-foot depth lysimeters were composited as L5-COMP and the samples from the four 10-foot depth lysimeters were composited as L10-COMP. Recycled water at the irrigation point was also monitored. The irrigated recycled water for this site was derived from the San Jose/Santa Clara Water Pollution Control Plant (SJ/SC WPCP). Recycled water use at the site was first implemented on September 4, 2008. Additives to the landscape included only fertilizer and grub control.

The monitoring program for the pilot study included baseline sampling of the water source and the monitoring wells and 8 subsequent sampling events of the irrigation water, lysimeters and monitoring wells. The frequency of sampling events was initially set at 50 days apart and later adjusted to 75 days to account for slower-than-expected percolation rates and to obtain additional long-term monitoring data. Due to limited sample volume capacity in the lysimeters, interim sampling events were conducted to complete analyses that could not be completed within the regularly scheduled sampling event. The analytes monitored were based on findings from Volumes I and II of this report. A list of these constituents is shown in Table III-3-1.

Pilot Study Implementation

Irrigation of recycled water at the pilot study began on September 4, 2008. Sampling for the pilot study was performed between October 27, 2008 and March 15, 2010. An additional monitoring event occurred on May 19, 2008 prior to recycled water irrigation, which served as the baseline. Results from the data analysis presented in Volume I and previous monitoring by SCVWD on December 12, August 16, and May 16-17 of 2007 were used as supplemental baseline data for comparative purposes. Chemical results for all sampling events are found in Table III-4-1. In addition, charts graphically displaying the chemical results are provided in Figures III-4-1 through III-4-48.

Pilot Study Results

Irrigation of recycled water was implemented on a seasonal basis during periods when there was insufficient natural rainfall to irrigate the landscaping (Figure III-2-2). Over the study period, L5-COMP, which is nearest to the surface, did not exhibit patterns strongly reflective of seasonal changes with irrigation use.

Based on the results obtained from the pilot study, the constituents that showed the highest potential to impact groundwater were NDMA, HAA6, and PFCs, due to their appearance in groundwater during the pilot study. NDMA, HAA6, and PFCs were not detected in the groundwater at the IDT site in the baseline sampling events prior to use of recycled water. For the first two sampling events after recycled water use began at the site, NDMA concentrations were found in the pore water at or above the California Department of Public Health's drinking water notification level of 10 ng/L (CDPH, 2007). NDMA concentrations in the pore water in the third and subsequent events were below 10 ng/L.

PFCs have shown removal in recycled water through the vadose zone in the pilot study but have also appeared in the groundwater at the IDT site. PFBA in particular was not found in the recycled water but was found in pore water sample locations suggesting the transformation to PFBA from other products. HAA6 is also a concern because of its presence in the pore water and potential to reach groundwater.

Sodium, magnesium, and calcium are constituents in recycled water that may limit soil drainage through clay swelling. Findings in the pilot study suggest that clays were already expanded to some degree in the first five feet through the pilot study period. The change in permeability due to the clay swelling could not be quantitatively measured, but was observed to be significant in the bench test portion of the study as reported in Volume II. Soil drainage can be restricted when switching to a water source with a greater sodium adsorption ratio (SAR). In this case the SAR of the recycled water would have to be greater than that of the water source previously used for expansion to occur.

Constituents that indicated moderate potential to impact groundwater include TDS, boron, sulfate, chloride and pathogens. Rising concentrations of chloride in the pore water and groundwater at the IDT site during the pilot study present a concern for potential long-term impact. Overall, chloride removal in the bench test was not well observed. Some biological constituents, specifically heterotrophic bacteria and total coliforms, were found to be present in the recycled water and to some extent in the pore water and groundwater. Overall there is some evidence from the pilot study suggesting that pathogens in recycled water could potentially impact groundwater. TDS results in groundwater, pore water, and recycled water from the pilot study including baseline data exceeded secondary drinking water standards. Moderately high levels of TDS found in groundwater at the IDT site, as seen in the baseline and pilot study, leave less capacity for further increases in TDS due to incoming recycled water used in irrigation. Boron and sulfate data from the pilot study and bench test suggested that attenuation was low. The soil and fertilizer were suspected to contribute more sulfate in the pore water than recycled water alone.

Most constituents indicated only minimal potential to impact groundwater, including phosphate, nitrate, nitrite, potassium, TOC, DOC, and THMs. Major nutrients such as phosphate and nitrate/nitrite appear to be greatly reduced from irrigation when vegetation is present and fertilizer is not overused. The plant uptake process is believed to be the major pathway for nutrient removal. TOC and DOC were not observed to reach groundwater in the pilot study.

Potassium and THMs were relatively stable in the groundwater through the pilot study. THMs were not detected in groundwater. Potassium was detected in groundwater but at concentrations similar to baseline levels. In addition, bench test data of potassium and THMs generally exhibited removal in the soil.

Alkalinity, pH, ORP, DO, and total chlorine showed negligible potential to impact groundwater through recycled water use. The stability of general parameters (pH, ORP and DO) as seen in the pilot study and bench test indicates that there were no major shifts in conditions in the vadose zone. Chlorine measurements in the pilot study in groundwater were generally higher than in recycled water.

VOCs (excluding THMs) were not detected consistently in recycled water in either the bench test or the pilot study and did not pose a potential threat to groundwater at the IDT site. In addition, Volume I of this study found that xylenes and carbon tetrachloride were regarded as having D) minimal potential impact. The data analysis of Volume I also did not find detections of any other VOCs in recycled water.

Cyanide, terbuthylazine, NTA, and perchlorate were not detected consistently in recycled water in either the bench test or the pilot study. Detections that did occur were near or at the reporting limit. In groundwater, only perchlorate was detected once. Because these parameters were not frequently present in the recycled water source at IDT, they did not have impacts to the groundwater at the IDT site. However, the attenuation behavior of these constituents could not be well examined.

EDTA and surfactants were not consistently detected in the recycled water in the pilot study, thus conclusions from the pilot study could not be made. However, EDTA and surfactants were detected in the recycled water during the bench test and were found to not attenuate well in the bench test.

With respect to permeability and the SAR, sodium, calcium, and magnesium do have an impact on groundwater. The water composition, as indicated by the SAR, from the recycled water and the pore water five feet bgs is more sodium-concentrated than the pore water from ten feet bgs and the groundwater. SAR data suggest the presence of clay swelling in the first five feet. However, the impact of the clay swelling on soil permeability could not be quantitatively measured. The sodium, calcium, and magnesium in the pore water at five feet bgs indicates the soil near the surface was already saturated with these three constituents, likely as a result of previous irrigation. Based on these findings, permeability changes due to recycled water as an irrigation source in clay type soils could present a concern for soil drainage when the SAR in recycled water is greater than the previous irrigation source.

Trends for the pilot study were determined in several ways including a piper diagram analysis and Mann-Kendall analysis. The piper diagram analysis used the cation and anion data to evaluate the trends in the groundwater and in the lysimeters. This approach evaluated the cations (calcium, magnesium, sodium, and potassium), and anions (chloride, sulfate, and bicarbonate) on the percent composition based on equivalence per volume concentrations. Results of the piper diagram analysis indicate a shift in the pore water and groundwater towards an ionic composition similar to that of recycled water. This is most evident in L5-COMP which is at the shallowest depth; however this trend is also discerned in the groundwater. The Mann-Kendall analysis was another approach used to evaluate trends. The Mann-Kendall analysis is a nonparametric statistical test used to to assess trends over time. The Mann-Kendall trends were evaluated for each constituent and location over time.

Below is a table summarizing the potential threat to groundwater with respect to each constituent based on findings from the pilot study and bench test. Each constituent is given a rating between 1 and 5, with 5 representing the highest potential threat. The criteria for assigning each threat are the observed attenuation of the constituent in the pilot study and bench test and the type of constituent. In general, the greater the overall attenuation behavior displayed from the bench test and pilot study the lower the potential threat is. Also considered is whether the constituent is naturally occurring or has known health impacts. The type of constituent can range from general water quality parameters like alkalinity and DO, to emerging contaminants like NDMA and PFCs. The potential threat assigned for each constituent below is a culmination of these factors. Some monitored constituents were not consistently detected in the recycled water source during the study. Since the attenuation of those constituents could not be evaluated, they are assigned as inconclusive. Further monitoring of recycled water sources is needed to determine whether those constituents are sufficiently present to pose a potential threat to groundwater.

In addition to the potential threat value, the table includes a recommendation on whether further monitoring of each constituent is warranted. Constituents that are recommended for further monitoring are those with a threat value of three or higher. The evaluation of potential threats presented below is based on the 18-month pilot study conducted at the IDT site. Due to the fairly limited monitoring period for this study, it is possible that the arrival of some constituents did not occur within the pilot study duration. As part of an agreement with the SCVWD, IDT is conducting ongoing groundwater monitoring at the site, and those results should be considered along with the findings of this study to guide future efforts.

Constituent	**Potential Threat**	**Recommend for Further Monitoring?**	**Findings**
ORP	1	N	ORP is a general water quality parameter. Measurements of ORP suggest no major shifts in redox conditions.
pH	1	N	The pH is a general water quality parameter. The pH was near neutral in the pilot study and bench test. Similarity of pH across depth indicates conditions are stable.
Chlorine, Total	1	N	Concentrations of chlorine were higher in groundwater than in recycled water and pore water in the pilot study.
Dissolved Oxygen	1	N	DO is a general water quality parameter. DO was 0.01 mg/L or above across depth in the pilot study indicating that anoxic conditions are unlikely. Samples from the bench test indicated oxic conditions.
Alkalinity, Total	1	N	Alkalinity is a general water quality parameter. A greater alkalinity in the pore water equates to more stability in pH conditions.
Bicarbonate Alkalinity	1	N	
Boron	3	Y	Boron removal was not well observed in the bench test or pilot study.

Calcium	2	Y (See SAR)	Calcium concentrations are greater in the subsurface than in recycled water.
Magnesium	2	Y (See SAR)	Magnesium concentrations are greater in the subsurface than in recycled water.
Sodium	4	Y	Sodium is directly related to SAR, as well as having a direct potential effect on groundwater.
Sodium Adsorption Ratio (SAR)	4	Y	SAR may indicate impact to soil drainage from clay swelling as a result of recycled water application when the SAR in the recycled water is higher than the SAR of the previous irrigation source.
Potassium	1	N	Potassium data from bench test and pilot study suggest good removal.
Sulfate	3	Y	Sulfate increased in concentration in pore water, likely due to contribution from soil and fertilizer. Sulfate concentration in groundwater was relatively stable in the pilot study. In the bench test, removal was not well observed. The constituent also contributes to the total dissolved solids.
Nitrite	2	N	Nitrate/Nitrite data show removal with depth in the pilot study. Mechanism is suspected to be attenuation by root uptake pathway.
Nitrate	2	N	
Chloride	4	Y	Chloride over time has shown an increasing trend in concentrations in groundwater and pore water. At the end of the pilot study, chloride had not yet reached stable conditions. Attenuation of chloride in the bench test was not well observed. The constituent also contributes to the total dissolved solids.
Total Organic Carbon (TOC)	2	N	TOC was decreased by microbial activity and adsorption to soil; groundwater was relatively stable in pilot study. The bench test findings were consistent with the pilot study.
Total Filterable Residue at 180C (TDS)	3	Y	Although TDS in the pilot study in groundwater appeared relatively stable, levels have been observed above secondary drinking water standards in both the baseline and subsequent events. TDS in recycled water and lysimeters are also above secondary drinking water standards. In the bench test, attenuation was not well observed.
Dissolved Organic Carbon	2	N	DOC was decreased by microbial activity and adsorption to soil; groundwater was relatively stable in pilot study. The bench test findings were consistent with the pilot study.

Bromodichloromethane (THM)	2	N	Bromodichloromethane was removed in the vadose zone. Bromodichloromethane was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.
Bromoform (THM)	2	N	Bromoform was removed in the vadose zone. Bromoform was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.
Chloroform (THM)	2	N	Chloroform was removed in the vadose zone. Chloroform was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.
Dibromochloromethane (THM)	2	N	Dibromochloromethane was removed in the vadose zone. Dibromochloromethane was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.
Carbon Tetrachloride (VOC)	1	N	Carbon tetrachloride was not detected in recycled water in pilot study or bench test. The constituent was also categorized as having minimal potential impact in Volume I.
Xylenes, Total (VOC)	1	N	Xylenes were not detected in recycled water in pilot study or bench test. The constituent was also categorized as having minimal potential impact in Volume I.
Additional 8010-list VOCs	1	N	VOCs were not detected in recycled water in the pilot study or bench test. VOCs excluding xylenes and carbon tetrachloride were also not detected in the data analysis of Volume I.
Haloacetic Acids (HAA6): Bromochloroacetic Acid Dibromoacetic Acid Monobromoacetic Acid Monochloroacetic Acid Trichloroacetic Acid	4	Y	HAA6 were not observed in the baseline groundwater samples but were observed in the applied recycled water, pore water, and groundwater during the pilot study. In the bench test, HAA6 attenuation was not well observed. HAA6 are also anthropogenic compounds.
Heterotrophic Plate Count	3	Y	Growth was present in pore water and groundwater. Growth was also observed in the bench test. Attenuation was not observed.
Coliforms, Total	3	Y	Growth was present in pore water and groundwater. Growth was also observed in the bench test. Attenuation was not observed.
Fecal Coliforms	3	Y	Fecal Coliforms were not present in groundwater during the pilot study. In the bench test, fecal coliforms were not frequently detected. Attenuation was not well observed.

E. Coli	Inconclusive	Y	E. Coli was minimally detected in recycled water in the pilot study. In the bench test, E. coli was not frequently detected. Therefore the attenuation behavior could not be examined. The constituent may be present in the other recycled water sources in the study area.
N-Nitroso Dimethylamine (NDMA)	5	Y	NDMA was not observed in the baseline groundwater samples, but was observed in the applied recycled water, pore water, and groundwater during the pilot study. The majority of attenuation of NDMA could potentially be from volatilization in the vadose zone and biotransformation in the soil. In the bench test, NDMA attenuation was not consistently observed. NDMA is an emerging contaminant.
Perfluorochemicals	5	Y	PFCs were not observed in the baseline groundwater samples, but were observed in the applied recycled water, pore water, and groundwater during the pilot study. Similarly, in the bench test, some PFCs were observed in the effluent but not in the influent. There is potential for PFC formation from precursors. PFCs are emerging contaminants.
Phosphate	1	N	Phosphate removal was observed in the pilot study and bench test. Mechanisms that caused removal of phosphates are suspected to be the root uptake pathway and precipitation.
Ethylenediaminetetraacetic acid (EDTA)	3	Y	EDTA was not detected in recycled water in the pilot study. In the bench test attenuation was not consistently observed.
Surfactants (MBAS)	3	Y	Surfactants were minimally detected in recycled water in the pilot study. In the bench test attenuation was not consistently observed.
Bromide	2	Y	Removal of bromide in the vadose zone is low; however the degree of toxicity of bromide is low. Together with chloride, bromide can be a useful tracer for recycled water transport.
Nitrilotriacetic acid (NTA)	Inconclusive	Y	NTA was not detected in the pilot study or bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.
Perchlorate	Inconclusive	Y	Perchlorate was not detected in recycled water during the pilot study or bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.

Cyanide	Inconclusive	Y	Cyanide was minimally detected in pilot study or bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.
Terbuthylazine	Inconclusive	Y	Terbuthylazine was minimally detected in recycled water in pilot study and bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.

VOLUME III
SAN JOSE PILOT STUDY
RECYCLED WATER STUDY

1. INTRODUCTION

This report was prepared by Locus Technologies (Locus) on behalf of the Santa Clara Valley Water District (SCVWD) for the Recycled Water Irrigation and Groundwater Study. Volume III covers the third phase of a study to evaluate the impacts from expanded use of recycled water for irrigation on groundwater resources in the Santa Clara and Llagas Groundwater Subbasins in Santa Clara County. This study uses a combination of approaches, including literature review, data analysis, a fate and transport evaluation, and a full pilot study at a site in the Santa Clara Groundwater Subbasin. The first and second phases of this study are reported in Volumes I and II respectively. This volume focuses on the pilot study portion of the evaluation, but includes support from findings from the first and second phases of this study.

1.1. Purpose

This volume of the report includes the results from the pilot study conducted at the Integrated Device Technology (IDT) site located at 6024 Silver Creek Valley Road, San Jose, California. The pilot study serves as a way to observe the transport of recycled water and the attenuation of its constituents from the surface to the groundwater under real-world conditions. For this report, attenuation is defined as the reduction in concentration of a constituent through the soil, through any process including but not exclusive to sorption, volatilization, transformation, or plant uptake. Constituent migration is operationally defined as the movement of constituents in the vadose zone and in groundwater. The pilot scale test is the final component of the fate and transport evaluation (the other components in the fate and transport evaluation included a literature review, data analysis, soil model, and bench test, presented in Volumes I and II of this report). The pilot study is conducted in a real environment that is irrigated with recycled water. The purpose of the study is to evaluate the recycled water fate and transport through the vadose zone and into the shallow saturated zone. Fate and transport is assessed by looking at depth-discrete chemical data in water as it migrates through the vadose zone and into the saturated zone. The following specific goal was identified for the pilot test:

- Examine the attenuation through soil for a list of constituents present in recycled water that may negatively impact groundwater as determined in Volume I and Volume II.

Recycled water commonly contains a number of constituents introduced through the original use of the water, or through the treatment processes that the water undergoes after use. The focus of the study is chemical constituents, including those of anthropogenic and nonanthropogenic origins. A few constituents of concern are biological. This study focuses on determining whether any of these constituents have the potential to negatively impact groundwater if recycled water is used for irrigation.

2. SITE BACKGROUND

The pilot study was conducted in the Santa Clara Subbasin at the IDT site, located at 6024 Silver Creek Valley Road, San Jose, California. It is bounded by Silver Creek Valley Road and Piercy Road. The IDT property maintains 6.2 acres of landscape: 2.8 acres of irrigated turf and 3.4 acres of irrigated shrub beds (ITAP, 2006). The property contains flat and sloping turf areas and narrow shrub beds which have mature drought tolerant shrubs, large trees, and groundcover. Southwest of the subject property beyond Piercy Road, lies Coyote Creek which runs northwestward toward the San Francisco Bay (USGS, 2011).

2.1. Irrigation

2.1.1. Irrigation System

The current irrigation system uses Hunter gear driven rotors, Toro gear driven rotors, and Toro four-, six-, and twelve-inch plastic pop-up spray heads. There are 127 irrigation control valves that are managed by four Sentar Rain Master Controllers. Between October 2008 and March 2010, about 10,000 hundred cubic feet (ccf) or approximately 23 acre-feet of recycled water for irrigation was applied. Significantly less irrigation was used during the winter months compared to summer months.

The typical root zone for water uptake in lawns and garden is 6 to 12 inches. For shrubs the typical root zone is 12 to 24 inches, and for trees the zone is 18 to 36 inches.

2.1.2. Recycled Source Water

The source of the irrigation water for the pilot study is recycled water supplied from the San Jose/Santa Clara Water Pollution Control Plant (SJ/SC WPCP) which services wastewater treatment to cities in the Santa Clara Subbasin including San Jose, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno. SJ/SC WPCP wastewater is treated in a three step process (City of San Jose, date unspecified). Primary treatment takes place in large settling tanks removing 40 to 60 percent of the suspended solids and 23 to 35 percent of the biochemical oxygen demand. Secondary treatment includes aeration and secondary clarifiers. The final step is tertiary treatment involving filtration through filter beds and then chlorination for disinfection. Pollutants and solid wastes removed from the three treatment steps are directed to anaerobic digesters. Post tertiary treatment, the portion reserved for reclamation is directed to an effluent diversion facility where the water is dosed with additional chlorine and is directed through a 4310-foot diversion pipeline at the end of which recycled water is distributed (Zadeh, 2010). These additional measures help meet the regulatory chlorine contact time (CT) of 450 mg-min/L (Title 22 §60301.230(a)). CT achieved at the end of the diversion pipeline ranges typically from 1000 to 4000 mg-min/L. SJ/SC WPCP recycled water meets Title 22 regulations.

With the exception of the baseline sampling, the location of the recycled water source sample is at the IDT site on a fixture directly attached to the irrigation line. Initial baseline sampling of the source was collected directly from the SJ/SC WPCP because recycled water use at the IDT site had not yet been implemented. Starting with the first sampling event, the recycled water samples for the study were taken directly from the irrigation system onsite. Recycled water use at the site was implemented on September 4, 2008. The irrigation system is not used as frequently during the winter months when it rains. Figure III-2-2 shows the irrigation use and precipitation data over the study period.

2.2. Vadose Zone

2.2.1. Soil Composition

Previous soil sampling indicated that most of the vadose zone soil at the site is made up of silty clay of medium plasticity. The unified soil classification system (USCS) identifies this soil with the code CL (lean clay). During the installation of the four monitoring wells at the site in 2005, soils were logged to 45 feet bgs by MJO Earthscience Services as part of an environmental baseline report for the IDT site (Pacific Crest Engineering Inc., 2005). The intent of the baseline report was to be used as a reference for when IDT eventually closes the subject site. In all four borings, groundwater was encountered at depths from 30 to 33 feet and well screens were installed between 25 and 45 bgs. However, the upper 30 feet consisted entirely of silty clay. Other shallower soil borings (four to five feet in depth) were also logged at 25 other locations at the site by MJO Earthscience Services, and the shallow soil type was consistently silty clay across the site. In 2008, Locus collected an additional soil core to 30 feet at a fifth location, and logged silty clay for the entire depth. Soil boring logs for all of these locations are included in Appendix III-A. Based on these soil boring logs, the soil appears to be uniform through the vadose zone and across the site. Because the soil characteristics appear to be homogeneous throughout the site, no areas were identified to be more sensitive to recycled water application based on soil type.

2.2.2. Lysimeters

Pore water from the vadose zone is represented by samples from the lysimeters. Four locations were chosen to have lysimeters installed. Since the shallow soil types at the site are not significantly variable, the lysimeter locations were selected based on accessibility and maximum expected infiltration rate. Based on irrigation rates and surface grading, irrigation water can be expected to infiltrate more heavily in some areas. Lysimeters were installed on July 17 and 18, 2008. Sample locations for the IDT site are shown in Figure III-2-1.

Two lysimeters were installed at each location: one at five feet bgs and the second at ten feet bgs. Lysimeters placed at five feet bgs are screened at 4.7 to five feet bgs. Lysimeters placed ten feet bgs are screened at 9.7 to ten feet bgs. According to previous studies discussed in Volume I, the attenuation of constituents is expected to be highest in the first several feet of the soil profile.

The lysimeters consisted of 54-inch long dual-chamber stainless steel lysimeters provided by Soil Measurement Systems. Each lysimeter has an outer diameter of 2 inches and an extractable sample storage capacity of 1,500 milliliters (mL). Lysimeters use a vacuum mechanism to collect pore water from unsaturated soil. The upper chamber of the lysimeter is used for sample storage and is designed to prevent back flow.

2.2.2.1. Lysimeters L1-5 and L1-10

Lysimeters L1-5 and L1-10 are located on the east end of a bed of turf grass which is adjacent to the west side of the second larger IDT building. These lysimeters are located in the lower end of a sloping turf bed. Half of the run-off from the sloping turf bed is directed to the L1 location. The other half is directed to the opposing end of the sloped turf bed where the L2 lysimeters are located. The sloping conditions of the turf bed result in more irrigation water infiltrating at this location. Two lysimeters were installed at the L1 location: one at a depth of five feet (L1-5) and one at a depth of ten feet (L1-10).

2.2.2.2. Lysimeters L2-5 and L2-10

Lysimeter L2-5 and L2-10 are located on the west end of a bed of turf grass which is adjacent to the west side of the larger second IDT building. These lysimeters are located in the lower end of a sloping turf bed. Half of the run off from the sloping turf bed is directed to the L2 location. The other half is directed to the opposing end of the sloped turf bed where the L1 lysimeters are located. The sloping conditions of the turf bed results in more irrigation water infiltrating at this location. Two lysimeters were installed at the L2 location: one at a depth of five feet (L2-5) and one at a depth of ten feet (L2-10).

2.2.2.3. Lysimeters L3-5 and L3-10

Lysimeter L3-5 and L3-10 are located on the north end of the property, in a strip of turf bed near the front driveway entrance. The turf bed is banked along the Silver Creek Valley Road. In addition to turf, the bed is lined with mature trees. The L3 location is located close to groundwater monitoring well MW-3 so that pore water and groundwater can be monitored at approximately the same location. Two lysimeters were installed at the L3 location: one at a depth of five feet (L3-5) and one at a depth of ten feet (L3-10).

2.2.2.4. Lysimeters L4-5 and L4-10

Lysimeter L4-5 and L4-10 are located on turf at the south end of the main field. The main field is located on the west end of the IDT property. These lysimeters are located close to MW-4 so that pore water and groundwater can be monitored at approximately the same location. Two lysimeters were installed at the L4 location: one at a depth of five feet (L4-5) and one at a depth of ten feet (L4-10).

2.2.2.5. Lysimeter Composites

The required sample volume needed to analyze for the full recycled water constituent list was 8000 mL. However, due to the limited water volume capacity of the lysimeters, it was not possible to collect adequate sample volumes from each lysimeter. Therefore, composite samples were collected to provide the sample volume required to accurately analyze for the entire list of constituents of concern. L5-COMP is the composite of L1-5, L2-5, L3-5, and L4-5. L10-COMP is the composite of L1-10, L2-10, L3-10, and L4-10. The composites allow for evaluating results with respect to soil depth. Variation between lysimeter locations could not be evaluated using composite sampling; however this variation is expected to be low due to the homogeneity of soil and surface conditions at the IDT campus.

2.3. Groundwater

Shallow groundwater on site is located at approximately 30 ft bgs. Based on the water levels of the existing monitoring wells, the groundwater flow direction appears to be north-northeast. A previous environmental investigation determined that the groundwater flow was westward (Pacific Crest Engineering Inc., 2005). The hydraulic gradient of the shallow groundwater is estimated to be 0.001 ft/ft. Because of the low hydraulic gradient, the groundwater flow direction is expected to fluctuate considerably, which may explain the differences in the groundwater flow direction over time. Any local pumping may potentially induce changes from the natural flow direction.

2.3.1. Existing Monitoring Wells

Shallow groundwater is represented by water from existing monitoring wells. In 2005, four groundwater monitoring wells were installed by Exploration Geoservices, Inc. as part of an environmental baseline report for the IDT site (Pacific Crest Engineering Inc., 2005). The four existing monitoring wells were installed to provide baseline data for when IDT eventually closes the subject site. The groundwater monitoring wells MW-1, MW-2, MW-3, and MW-4 are shown in Figure III-2-1. Each of these monitoring wells has a casing diameter of 4 inches and is screened from 25 to 45 feet bgs. Appendix III-A includes the boring logs and wells diagrams for these monitoring wells. The monitoring wells are used to monitor groundwater quality constituent concentrations in the shallowest saturated zone. The average screen depth is 35 ft bgs.

2.4. Landscape Additives

IDT regularly applies fertilizer and grub control onto the landscape. One of three fertilizers is utilized depending on the season. The three fertilizers used are Andersons Golf Products Turf Fertilizer 30-3-9 with Poly-S® Nitrogen & 2% Iron (from February to September), Best® Nitra King® 19-4-4 with 2.2% Iron (from October to November), and Best® Ammonium Sulfate 21-0-0 (from December to January). Together, the fertilizers contain nitrogen, phosphate, potassium, sulfur, iron, calcium, and chlorine. Nitrogen, phosphate, and potassium are major nutrients for plant growth. Sulfur, iron, calcium, and chlorine are minor nutrients for plant growth. The grub control (Nemasys® G) contains live nematodes to control the growth of pest larvae. The grub control is used in conjunction with surfactants (AquatrolsSixteen 90) for optimal effectiveness. Product sheets for the landscape additives are found in Appendix III-B. Gypsum (hydrated calcium sulfate), commonly used to promote soil hydraulic conductivity, is not used at the site.

3. METHODOLOGY

To evaluate the effects that recycled water irrigation may have on groundwater, it is necessary to characterize the groundwater conditions before and after recycled water application begins. Groundwater conditions before recycled water application were established by a water quality baseline sampling event for comparison with subsequent sampling events. One baseline sampling event was performed as part of this pilot study. The SCVWD also conducted three additional baseline sampling events prior to the pilot study, which were used to supplement the data. The pilot study subsequent sampling events monitored groundwater and pore water conditions as recycled water was applied, and were designed to observe the effects of recycled water as it migrated through the vadose zone and into the saturated zone. Results from the sampling were used to observe the constituent concentrations over depth and over time.

The constituents monitored in this pilot study were selected based on their presence in recycled water sources and the potential negative impact the constituent may pose to the beneficial uses of groundwater. An evaluation of recycled water constituents and their potential to impact groundwater was presented in Volume I of this report.

For support and comparison, findings from the bench test (originally presented in Volume II of this report) are included in the pilot study evaluation. Conclusions from the bench test, specifically whether or not attenuation was consistently observed for the constituent, were compared with the pilot study findings. The overall conclusions for this volume consider findings from both the bench test and pilot study.

3.1. Analytes

Each location sampled was tested for a set of constituents (shown in Table III-3-1) based on the findings from Volume I. Constituents were selected based on the potential negative impact the constituent may pose to the beneficial uses of groundwater. Specifically, constituents were selected based on the following criteria: 1) potential to degrade groundwater based on significantly higher concentrations in recycled water, 2) fate and transport characteristics (e.g., mobility, persistence), and 3) an established state or federal regulatory, action, or notification level indicating potential human health effects. Aldicarb sulfoxide, PHaCs, NDCs, NBBS, and trisphosphates, which were recommended for further monitoring from Volume I, were not included in the pilot study as a commercial laboratory to test for these constituents could not be identified. While these constituents were not monitored, the constituents that were included in the monitoring plan for the pilot study cover a wide characteristic range that strongly represents recycled water. In addition, bromide was included in the sampling list as a tracer.

VOCs, which were not recommended for further monitoring in Volume I, were included in the pilot study because the VOCs are reported as a part of the analysis (EPA 8260B) that also analyzes THMs.

Constituents including ethylenediaminetetraacetic acid (EDTA), surfactants (MBAS), nitrilotriacetic acid (NTA), perchlorate, cyanide, and terbuthylazine, which were initially analyzed in the pilot study, were later scaled down in monitoring scope because these constituents were not consistently found above detection limits in the recycled water during the pilot study or bench test. Further discussion of the monitoring changes for specific constituents is included in Section 4.1.

3.2. Analytical Laboratories

To cover the necessary analyses needed for this pilot study, three primary analytical laboratories were used: Curtis and Tompkins, Montgomery Watson Harza Laboratories, and EMLab P&K. All three are California state-certified laboratories. Specific analyses assigned to each laboratory are listed on Table III-3-1.

3.3. Data Evaluation

3.3.1. Mann-Kendall Trend Analysis

Data results were evaluated using a Mann-Kendall trend analysis. The Mann-Kendall trend analysis was evaluated over the entire pilot study period, from the baseline event to the last sampling event. Results for the the Mann-Kendall trend analysis are provided in Table III-4-4. The Mann-Kendall is a nonparametric statistical test that is used to assess trends over time. The procedure compares the most recent datum with results of the earlier sampling events. A +1 point is awarded if the most recent concentration is larger, or a

-1 point is awarded if the most recent concentration is smaller. Where the recent concentration is equal to the compared result, no point is awarded and the comparision is regarded as a tie. The total score for the time series data is called the Mann-Kendall statistic (S), which is then compared to a critical value, to test whether the trend in concentration over time is increasing ("up"), decreasing ("down"), or if no trend ("none" or "none - all ties") in concentration can be determined. Conditions set for the trend analysis include treating nondetect values at the reporting limit and using a five percent significance level (i.e. 95% confidence). A probability is also included in Table III-4-4 which indicates the level of uncertainty in the trend. A lower probability indicates high confidence of the resulting trend. The difference between "none" and "none – all ties" is that in the "none – all ties" case, all the values are equal to each other. In this data set, this occurs because all the values are below detection and are treated at the reporting limit which is consistent through the pilot study. A trend of "none" is reported when the concentrations fluctuate, and the trend direction cannot be determined with a confidence of 95%. Results of the Mann-Kendall analysis are discussed with the concentration data in Section 4.1. The Mann-Kendall analysis included the baseline data as part of the evaluation to represent conditions prior to recycled water irrigation. Any concentration changes in subsequent events were compared to the baseline data.

The Mann-Kendall analysis is a more statistically robust analysis compared to the percentage difference approach used for the bench test data in Volume II. Since only two sampling events were collected for the bench test, a Mann-Kendall analysis could not be performed on those data. The pilot study reported a sufficient volume of data for this analysis.

3.3.2. Quality Assurance/Quality Control

Quality assurance/quality control evaluations were performed for all laboratory reports. The following criteria were considered in evaluating data quality:

- Duplicate sample results should be within 25% of each other
- Field blank and method blank samples should not have constituents detected
- Recovery of surrogate analyses should be 80 to 120%
- Matrix and blank spike samples should have 50 to 150% recovery

- Spike and spike duplicate results should be within 35% of each other

These data quality indicators were used when method-specific quality control limits were not specified by the laboratory. Data that did not meet criteria resulted in data being disregarded or qualified, depending on the degree to which quality control was compromised. Qualified and/or disregarded data is flagged in Table III-4-1.

3.4. Sampling Frequency

The pilot study was implemented over a period of 18 months. A summary of events during the pilot study can be found in Table III-3-2.

3.4.1. Baseline Sampling Event

On May 19, 2008, prior to implementation of recycled water irrigation at the IDT site, samples were collected from the four existing monitoring wells and the recycled water source at SJ/SC WPCP to represent conditions prior to application of recycled water at the site. Additional baseline sampling on May 16-17, 2007, August 16, 2007, and December 20, 2007 was conducted by the SCVWD at the four existing monitoring wells. The additional baseline sampling was a subset of constituents monitored in the pilot study. Reporting limits were different from the pilot study for some of the constituents in the additional baseline monitoring. The baseline sampling was used to determine the pre-existing concentrations in the groundwater and the initial conditions of the recycled source water.

Additional analyses were added for the final baseline sampling event in May 2008, based on the results of Volume I of this study. An abbreviated analysis list was used for the prior baseline sampling events. Lysimeters were not part of the baseline sampling event because they were not installed until July 2008. The recycled water source was only sampled in the May 2008 baseline sampling event.

3.4.2. Subsequent Sampling Events

After the baseline sampling, eight sampling events took place over the course of the pilot study between October 27, 2008 and March 1, 2010. For each of these sampling events, thirteen locations were sampled: four existing groundwater monitoring wells (MW-1 to MW-4), eight lysimeters, and one at the selected recycled water source location as discussed in Section 2.1.2. The lysimeter samples were composited into two samples (L5-COMP, L10-COMP) as described in Section 2.2.2.5 to meet sample volume requirements.

Sampling events began approximately 50 days after recycled water irrigation had initiated. Each sampling event was initially scheduled approximately 50 days apart. The initial frequency was estimated using the geometric mean of the hydraulic conductivity of the shallow soil at the site. Two soil samples were collected at the IDT site as part of the bench test as described in Volume II, and analyzed for permeability. From these measured values (4.7×10^{-6} and 3.1×10^{-4} centimeters per second (cm/sec)), a geometric mean hydraulic conductivity of 3.8×10^{-5} cm/sec was calculated. This value is expected to be representative of the vadose zone across the site because of the observed vertical and horizontal homogeneity of soil types as discussed in Section 2.2.1. Based on this value, the irrigation water was expected to migrate downwards through the vadose zone at a maximum rate of 0.1 feet per day. Following the third sampling event, the sampling schedule was adjusted to sample every 75 days because downward migration appeared to be slower than predicted.

3.4.3. Sample Extraction for Lysimeters

In addition to compositing the lysimeters, the lysimeters were sampled in two sample extractions for each sample event due to large sample volume required and limited capacity of the lysimeters. The capacity of the lysimeter is 1500 mL. Therefore the maximum sample volume yielded from compositing four lysimeters is 6000 mL. However, a full set of analyses listed in Table III-3-1 requires approximately 8000 mL. To accommodate for the limited volume, an interim trip was made approximately three weeks following the initial sample extraction as shown in Table III-3-2. The interim extraction provided additional sample volume used to complete the analysis list. Interim samples were collected from all the lysimeters and were not composited with the initial samples. Appendix III-C contains the chain of custody forms indicating what analyses were done in each event. Lysimeters maintained a continuous vacuum to maximize the sample volume as needed by the study. Because water is stored in the chamber once it enters the lysimeter until time of sampling, time between storage and sampling may change the characteristics of the water from that of vadose zone water. Given the constraints of the lysimeter devices, it is assumed that the characteristic differences are minimal.

3.5. Sampling Protocol

3.5.1. Monitoring Well Sampling

Immediately before sampling each well, standing water was purged from the casing and gravel pack using electric submersible pumps. In each well, three casing volumes were purged prior to sampling, except in the case where the well was pumped dry during purging. The casing volume was determined before sampling by measuring the depth to water, subtracting that from the total depth of the well (45 feet for each well), and multiplying the water column height by 1.96 to obtain the casing volume in gallons. The calculation of the 1.96 conversion factor is shown below.

$$
\begin{aligned}
3\,\text{casing volumes (gal)} &= 3\left[\text{casing cross-sectional area }(\text{ft}^2)\right]\left[\text{water column height (ft)}\right]\left[\frac{7.48\,\text{gal}}{1\,\text{ft}^3}\right] \\
&= 3\pi\left[\text{casing radius (ft)}\right]^2\left[\left[\text{well depth}\right]-\left[\text{water table depth}\right]\right]\left[\frac{7.48\,\text{gal}}{1\,\text{ft}^3}\right] \\
&= 3\pi\left[\frac{2}{12}\,\text{ft}\right]^2\left[\frac{7.48\,\text{gal}}{1\,\text{ft}^3}\right]\left[\left[\text{well depth}\right]-\left[\text{water table depth}\right]\right] \\
&= \left[1.96\,\frac{\text{gal}}{\text{ft}}\right]\left[\left[\text{well depth}\right]-\left[\text{water table depth}\right]\right]
\end{aligned}
$$

All four monitoring wells at the site have the same casing radius (2 inches) and well depth (45 feet). During the purging process, pH, temperature, and conductivity were monitored to verify that the readings were steady before sample collection. The final steady-state measurements of these parameters were recorded on the well sampling form, along with other field measurements listed in Table III-3-1 (ORP, dissolved oxygen, total chlorine).

Purge water from the monitoring wells was reapplied on the IDT site landscape in an area not located near the lysimeters or monitoring wells (e.g. along the south border or northernmost corner of the parking lot).

3.5.2. Lysimeter Sampling

Each installed lysimeter has two ¼-inch diameter tube attachments, one to apply vacuum or pressure and one for fluid return. To obtain a sample, the fluid return tube is sealed, and a vacuum is applied to the vacuum/pressure tube. This action moves the water from the lower chamber where water enters the lysimeter to the upper chamber where it can be stored and extracted. To collect the sample, the fluid return tube is opened and inserted into the sample container. A pressure is applied to the vacuum/pressure tube, and the sample water is forced up through the fluid return tube. The vacuum was reapplied immediately after sample extractions, and on a regular basis between sampling events to maintain negative pressure in the lysimeters for the duration of the study.

Lysimeters were purged once, prior to the first sampling event, to remove the residual water left behind during installation of the lysimeter.

3.5.3. Recycled Water Source Sampling

For the May 2008 baseline sampling event, recycled water could not be sampled directly at the pilot study site because the irrigation system was not yet connected to the recycled water source. Therefore, the baseline sample representing the recycled water source was collected from the SJ/SC WPCP, located approximately 15 miles northwest of the pilot study site. Starting with the first monitoring event after recycled water application began, the irrigation source samples were collected by using an attachment on one of the spray heads of the irrigation system. Using this method, the samples represent the irrigation source prior to any volatilization or photodegradation that would occur as a result of the use of spray irrigation.

3.5.4. Quality Control Samples

For quality assurance/quality control (QA/QC) purposes, a duplicate water sample was collected for every 20 field samples to evaluate precision in the laboratory and sampling procedures. Similarly, a blank water sample was collected for every 20 field samples. One rinseate blank was also collected during the pilot study to evaluate cross contamination by sampling equipment. Blank samples were used to evaluate any potential false positives in the samples. All QA/QC samples were analyzed by the laboratory using the same preparation and analytical methods.

3.5.5. Documentation

A water sampling log was completed for each sample collected, except for quality control samples. Water sampling logs and chains of custodies are included in Appendix III-C. All purging information, as well as field measurements and associated quality control samples are recorded on the water sampling log. The samples were also recorded on a chain of custody form sent with the samples to the laboratory. Logs for recharging the lysimeters are included in Appendix III-D.

4. RESULTS

4.1. Chemical Results

This section discusses the analytical results of the constituents of recycled water that were monitored. Chemical results discussed in this section may be found in Table III-4-1. Minimum and maximum range data and Mann-Kendall trend analyses are included in this section with the text. For minimum and maximum range data, the baseline includes four baseline data events: May 19, 2008; December 20, 2007; August 16, 2007; and May 16-17, 2007. Sample event numbers refer to the sequence after recycled water implementation (e.g. 1st event is the first event after recycled water application began).

In addition, charts graphically displaying the chemical results are provided in Figures III-4-1 to III-4-48. Concentrations are plotted in these figures over time at each location, and also over depth for each sampling event (with average concentrations from the monitoring wells used to represent the concentrations at 35 feet). Data results with no detections are treated as zero in the figures. A legend of data qualifiers and results of QA/QC data are provided in Tables III-4-2 and III-4-3 respectively. A table summarizing the Mann-Kendall trend analyses is provided in Table III-4-4. Original lab reports of the constituent analyses are found in Appendix III-E.

For each constituent, the concentrations were evaluated with respect to the following questions:

- Does the constituent concentration consistently change with depth, indicating possible attenuation through the soil?
- Is there a clear increasing trend in the concentrations in pore water or groundwater over time, suggesting a potential impact to groundwater in the short-term or long-term?
- Is the constituent present only in recycled water or are there other sources in the pilot study (e.g. naturally occurring, or derived from fertilizer or soil amendments)?

These questions address the overall goals of this study, and will be used to determine which constituents have the potential to impact groundwater within the Santa Clara and Llagas Groundwater Subbasins.

Chemical results covered in this section discuss water from three categories: irrigation water (recycled water), vadose zone, and groundwater. Irrigation water is represented by samples collected from the irrigation system, pore water from the vadose zone is represented by the lysimeters, and groundwater is represented by monitoring wells MW-1 to MW-4.

In the vadose zone, soil is not fully saturated so that pore water is exposed to air and potential for volatilization is present. Microbial activity in the upper vadose zone region is high. Near the surface of the soil, in the presence of vegetation, root uptake serves as a sink for nutrients found in recycled water. Soil interacts with the pore water through soil sorption/desorption and filtration processes. Evapotranspiration of water may occur, particularly in the upper vadose zone. In addition to irrigation water, rain water is also a source for water found in the vadose zone. Due to water losses and gains from these processes, concentrations of conservative constituents from the irrigation to the vadose zone are expected to concentrate by a factor of two (see section 4.3). Results discussed in Section 4.1 take into account the concentration effect between irrigation water and pore water.

The shallow groundwater is a fully saturated zone. The volatilization pathway is not significantly present at this stage. Groundwater is a mixture of pore water percolating from the vadose zone and groundwater currently present or flowing onsite through the saturated zone, which may include recharge from nearby Coyote Creek. The extent of dilution at this site is not known.

General Water Quality

4.1.1.1. pH and Alkalinity

Measured pH remained in a neutral or near neutral range in the recycled water, pore water, and groundwater. Generally, pH in the irrigation and the pore water were slightly higher than in the groundwater. The pH of recycled water fell within the pH range expected from the previous data analysis in the literature review and agrees with the values obtained from the bench test. The groundwater pH was observed in the lower end of the pH range expected from the data analysis (see Volume I). Because the pH of groundwater is also near neutral, groundwater pH would not likely be affected by the irrigation of recycled water. The near neutral pH across all locations indicates that recycled water did not cause major shifts in pH in either the vadose zone or the groundwater. The pH in the bench test effluent and influent were also found to be near neutral.

Summary of Median [Minimum - Maximum] Data for pH (pH unit)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	7.34 [6.75 - 7.94]	-	-	6.75 [6.24 - 7.4]
Sample Events		7.26 [6.43 - 7.76]	7.22 [6.55 - 7.84]	6.77 [6.41 - 6.9]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

Alkalinity was highest in the pore water followed by the groundwater, and lowest in the recycled water. Alkalinity in the recycled water was within the expected range from the Volume I data analysis and agrees with the values obtained from the bench test. Alkalinity in the groundwater was in the higher end of the alkalinity range expected from the data analysis. The primary form of alkalinity was bicarbonate. Contributions to alkalinity from other forms such as phosphate, sulfides, or borates were minimal. Alkalinity increased in concentration from the recycled water to the pore water likely as a result from leaching of naturally occurring carbonate material in the soil. In the bench test, alkalinity was found not to be significantly different in concentration in the influent and effluent samples potentially due to the shorter distance of percolation and shorter monitoring time frame.

Alkalinity is a measure of the buffering capacity of water. The high alkalinity in the pore water suggests that the vadose zone is resistant to pH changes.

Summary of Median [Minimum - Maximum] Data for Alkalinity, Total (as CaCO3) (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	170 [170 - 210]	-	-	351.5 [299 - 510]
Sample Events		620 [470 - 720]	690 [660 - 730]	368 [240 - 490]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.1.2. Total Dissolved Solids

Total dissolved solids (TDS) or Total Filterable Residue (at 180 °C) concentrations in recycled water fell within the expected range from the Volume I data analysis. TDS in the recycled water, lysimeters and majority of groundwater wells at IDT were above the national secondary drinking water standard of 500 mg/L. TDS was observed to be highest in L5-COMP followed by L10-COMP, recycled water, and groundwater. TDS in the five-foot lysimeters was initially high relative to the recycled water possibly as a result of the contribution of material leached from the soil. The increase may also be as a result of water loss from evapotranspiration and thus concentrating the constituent. In the bench test, TDS concentrations between the influent and effluent were not significantly different suggesting low attenuation. TDS in L10-COMP was lower than in the L5-COMP. Over time, TDS in the L5-COMP decreased while TDS in recycled water appeared stable relative to the concentration changes in the pore water. TDS in the groundwater remained relatively stable through the study relative to changes in the pore water. While TDS groundwater remained relatively stable, monitoring should be continued to ensure that recycled water does not further impact groundwater relative to secondary drinking water standards.

Summary of Median [Minimum - Maximum] Data for Total Dissolved Solids (TDS) (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	740 [690 - 880]	-	-	549 [380 - 738]
Sample Events		1650 [1240 - 2180]	1075 [1010 - 1280]	560 [400 - 760]
Mann-Kendall Trend	None	Down	Down	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.1.3. Dissolved and Total Organic Carbon

Dissolved organic carbon (DOC) and total organic carbon (TOC) were observed to be similar in concentrations to each other in most sampling locations. TOC and DOC were observed to be highest in L5-COMP, followed by recycled water, L10-COMP, and groundwater. In only L5-COMP, TOC and DOC were observed to be very high in the first sampling event followed by a reduction to levels similar to that of recycled water. The initial peak in organic carbon observed in L5-COMP suggests an initial desorption of material resulting from the switch to recycled water as an irrigation source, which was similar to the behavior of TDS. TOC and DOC remained stable thereafter. In the bench test, TOC and DOC displayed a similar behavior of initial high effluent concentrations followed by more subsided concentrations in the later event.

The lower concentrations of organic carbon in the L10-COMP relative to L5-COMP suggest removal occurring with depth potentially due to filtering, adsorption to soil, and aerobic respiration.

The only data qualifier flag that was applied to the DOC results in the pilot study was the "B" flag, which was applied to one sample from the L5-COMP location. A discussion of each flag is found in Section 4.2.4. Although there is some reduced confidence in the qualified data, only a few data points were affected and those qualified results are consistent with other samples from the same locations. Therefore, the data are still appropriately useful for comparative purposes and are therefore used for evaluation in this study.

Summary of Median [Minimum - Maximum] Data for Dissolved Organic Carbon (DOC) (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	6.2 [4.8 - 7.2]	-	-	1.25 [0.44 - 1.6]
Sample Events		7.8 [6.2 - 78]	3.45 [2.7 - 6.4]	ND 1 [ND 1 - 2.1]
Mann-Kendall Trend	Down	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

Summary of Median [Minimum - Maximum] Data for Total Organic Carbon (TOC) (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	6.4 [5.4 - 8]	-	-	0.69 [0.44 - 0.91]
Sample Events		7.55 [5.8 - 73]	3.35 [2.9 - 6.6]	0.595 [ND 0.5 - 0.88]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.1.4. Redox Potential and Dissolved Oxygen

Generally, oxidation reduction potential (ORP) at all sample locations was stable, maintaining measurements between 50 and 200 mV. ORP measurements in the lysimeters correlated strongly with measurements in recycled water, beginning with the third sampling event. ORP in the recycled water was high in comparison to groundwater in the baseline event. ORP data suggest that there were no major shifts in redox conditions. ORP measurements in the bench test also suggested that there were no major shifts in redox conditions.

Summary of Median [Minimum - Maximum] Data for ORP (mV)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	126 [78 - 417]	-	-	183 [174 - 192]
Sample Events		112 [25 - 182]	100.5 [69 - 179]	114.5 [68 - 915]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: Down MW-4: None

Dissolved oxygen (DO) concentrations in groundwater water remained at 0.01 mg/L or above throughout the pilot study, indicating oxic conditions. DO measurements in groundwater for the baseline sampling events were also low but were always 0.01 mg/L or higher. DO in the recycled water remained at concentrations above 0.01 mg/L. DO in the L5-COMP and L10-COMP locations were measured but are not considered representative because compositing of samples could not be completed without some exposure to air. Groundwater DO remained above 0.01 mg/L through the pilot study suggesting anoxic conditions are unlikely to occur as a result of recycled water used for irrigation at the site. In the bench test, the system also maintained oxic conditions.

Summary of Median [Minimum - Maximum] Data for Dissolved Oxygen (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	5.69 [0.04 - 8.1]	-	-	0.045 [0.01 - 0.05]
Sample Events		8.315 [5.84 - 11.3]	8.365 [6.21 - 9.89]	1.315 [0.51 - 4.94]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.1.5. Total Chlorine

Total chlorine was measured in the pilot study because it is an easily tested field measurement and can provide useful information with regard to bacterial counts. Total chlorine was unexpectedly higher in the groundwater than in the other locations. It is unclear why chlorine results were higher in the groundwater, but the median heterotrophic plate count was found to be lower in the groundwater compared to the recycled water and pore water during the pilot study. Consistency in measurements between sampling events suggests no issues with QA/QC. The baseline total chlorine concentration in recycled water was high because the sample was taken near the treatment plant compared to the total chlorine concentration for the subsequent sample events which were taken at the IDT site. Levels of total chlorine appear to diminish as recycled water travels from the plant to the site. Because of low levels of total chlorine in the recycled water relative to groundwater, total chlorine does not appear to be a concern for groundwater impacts due to recycled water irrigation.

In the bench test, detection of total chlorine in the influent and soil core effluent was overall sporadic.

Summary of Median [Minimum - Maximum] Data for Chlorine, Total (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	0.13 [0.04 - 8.8]	-	-	-
Sample Events		0.125 [0.07 - 0.42]	0.13 [0.04 - 1.05]	0.89 [0.21 - 2.2]
Mann-Kendall Trend	None	None	None	MW-1: Down MW-2: Down MW-3: None MW-4: None

4.1.2. Anions and Cations

4.1.2.1. Chloride

Generally chloride was highest in recycled water followed by L5-COMP, L10-COMP and groundwater. Chloride concentrations in recycled water were stable over time relative to changes in the pore water. Chloride in L5-COMP and L10-COMP steadily increased over time. Chloride concentrations in the lysimeters do not appear to have reached equilibrium during the pilot study, and may have the potential to increase further. No mechanisms for removal of chloride were identified in the literature review and the mobility of chloride as seen in the data suggests that mechanisms for chloride removal are minimal. Most chloride samples were below the secondary drinking water standard for chloride of 250 mg/L. Chloride was detected above 250 mg/L only once in the recycled water source and once in L5-COMP during the pilot study.

In groundwater, chloride at MW-3 increased toward the end of the study indicating a potential long term effect on groundwater. Chloride in the other groundwater wells remained stable.

In the bench test, chloride did not change significantly between influent and effluent samples, suggesting also that attenuation of chloride was low.

Summary of Mean [Minimum - Maximum] Data for Chloride (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	200 [190 - 280]	-	-	26 - 72
Sample Events		125 [86 - 270]	81 [71 - 130]	25 - 95
Mann-Kendall Trend	None	Up	Up	MW-1: None MW-2: None MW-3: Up MW-4: None

4.1.2.2. Sulfate

Sulfate was found to be highest in L5-COMP followed by L10-COMP, recycled water, and groundwater. The increase in sulfate concentrations from recycled water to the pore water at five feet bgs was likely caused by sulfate found in the fertilizer. The heaviest sulfate-containing fertilizer was applied in December and January. Sulfate in the fertilizers used in the other months were lower in concentration. The contribution of sulfate from this source to pore water appears to be significantly higher than the contribution from recycled water. Some increase may also be as a result of water loss from evapotranspiration and thus concentrating the constituent. At ten feet bgs, sulfate concentrations were decreased significantly from five feet bgs. At the groundwater depth, sulfate concentrations decreased from the ten foot depth, although the decrease may be due to dilution in groundwater. Decreases of sulfate in the pore water over depth may have occurred from mineralization. The plant uptake pathway is not likely to affect the analysis to a large degree, and absorption of sulfate requires positively charged surfaces which are not common in mediterranean climates such as the study area. Sulfate concentrations in the lysimeters were found above secondary drinking water standard of 250 mg/L.

Sulfate concentrations in recycled water and groundwater were stable over time relative to the changes in the pore water. Sulfate in L5-COMP and L10-COMP steadily decreased over time. The result may be from the use of a more sulfate-heavy fertilizer in January and December than the rest of the year. In the bench test, sulfate generally exhibited no significant differences in concentration between influent and effluent water samples.

Summary of Median [Minimum - Maximum] Data for Sulfate (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	95 [89 - 110]	-	-	69.45 [40 - 129]
Sample Events		545 [260 - 980]	195 [130 - 320]	60.5 [34 - 80]
Mann-Kendall Trend	None	Down	Down	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.2.3. Bromide

Bromide was highest in concentration toward the surface. Bromide concentrations in recycled water and the lysimeters were similar, and correlated strongly over time starting with the fourth sampling event. Groundwater bromide concentrations were lower than the recycled water and lysimeter concentrations throughout the pilot study. It should be noted that the reporting limit for bromide for the baseline sampling event was 0.5 mg/L, and all bromide concentrations (for groundwater and recycled water) were below detection. Figure III-4-12A shows these points as zero. Subsequent sampling events had a bromide reporting limit of 0.05 to 0.065 mg/L, and most concentrations in all sources were detected between 0.05 and 0.5 mg/L. In the bench test, bromide was below detection in the influent and effluent samples. The laboratory reporting limit in the bench test was 0.5 mg/L.

The only data qualifier flag that was applied to any bromide results was the "J" flag, which was applied to a single concentration from the L10-COMP location in the first sampling event. A discussion of the "J" flag is found in Section 4.2.4. The "J" flag reduces confidence in the quantification of the constituent but does not negate the fact that the constituent was detected. The flagged concentration is consistent with other concentrations from this location, and the qualified data does not affect the other results or affect the bromide findings above.

Summary of Median [Minimum - Maximum] Data for Bromide (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	0.27 [ND 0.5 - 0.38]	-	-	0.17 [ND 0.5 - 0.32]
Sample Events		0.26 [0.16 - 0.43]	0.235 [0.15 J - 0.3]	0.165 [ND 0.065 - 0.26]
Mann-Kendall Trend	None	None	Up	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.2.4. Cyanide

Cyanide, which was monitored only in the recycled water, was detected infrequently and near the reporting limit. Cyanide was monitored only in the recycled water as recommended from the bench test conclusions to limit the monitoring of constituents that were not frequently detected. In the bench test, cyanide was below detection in both the influent and effluent. The reporting limit for cyanide ranged from 0.005 to 0.01 mg/L in the pilot study and bench test. The range is below the California MCL for cyanide of 0.15 mg/L. Because cyanide is not prominent in the recycled water source, the attenuation behavior was not observed.

Summary of Median [Minimum - Maximum] Data for Cyanide (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 0.01 [ND 0.005 - 0.02]	-	-	ND 0.005 [ND 0.005 - ND 0.005]
Sample Events		-	-	-
Mann-Kendall Trend	None	-	-	-

4.1.2.5. Boron

Boron was highest in recycled water followed by the lysimeters, and lowest in the groundwater. Boron concentrations across all locations did not appear to change significantly over time. Boron concentrations decreased from recycled water to the pore water at five foot bgs, possibly due to plant uptake. Concentrations of boron at the five foot and ten foot depth did not appear to change significantly. Boron in groundwater was relatively stable through the pilot study. The results suggest that boron in the recycled water may have not yet reached groundwater. In the bench test, boron concentrations in the influent and effluent were not significantly different, suggesting that the soil cores had minimal effect on this constituent.

Summary of Median [Minimum - Maximum] Data for Boron (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	460 [380 - 480]	-	-	189 [140 - 229]
Sample Events		285 [250 - 400]	285 [230 - 330]	190 [130 - 240]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.2.6. Potassium

Potassium was highest in recycled water followed by L5-COMP, L10-COMP, and groundwater, indicating a consistent decrease in concentration with depth. Potential mechanisms for the decrease include plant uptake and sorption. In clay soils, potassium is preferentially sorbed due to a high charge to size ratio. Results are similar to the bench test, where potassium exhibited significant removal in the soil cores. In addition to recycled water, minor amounts of potassium from fertilizer contributed to potassium at the soil surface.

The Mann-Kendall trend analysis did not indicate statistically significant upward or downward trends of potassium in recycled water, groundwater, or L5-COMP. In L10-COMP, potassium decreased over time particularly in the early portion of the pilot study. The decreasing trend in the early part of the pilot study may be the result of the fluctuation observed in the recycled water. Data suggest that there is minimal potential for potassium to negatively impact groundwater.

Summary of Median [Minimum - Maximum] Data for Potassium (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	15 [12 - 19]	-	-	0.83 [ND 0.5 - 2.3]
Sample Events		5.2 [2.5 - 9.3]	1.35 [1.1 - 3.6]	0.605 [ND 0.5 - 1.1]
Mann-Kendall Trend	None	None	Down	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.2.7. Sodium Adsorption Ratio

The sodium adsorption ratio (SAR), which is calculated from calcium, magnesium, and sodium data, describes the concentration of sodium relative to calcium and magnesium. A high level of SAR in the recycled water relative to the soil has the potential to cause clay swelling and reduce hydraulic conductivity. A decrease of SAR in the vadose zone with respect to depth suggests that sodium ions are replacing calcium and magnesium ions in the intra-particle clay surfaces, which causes clays to swell. A further background discussion of SAR may be found in Section 3.1 of Volume I. SAR was observed to be highest in recycled water and L5-COMP, followed by L10-COMP and groundwater. The SAR values in the groundwater and L10-COMP were stable over time, and SAR in L10-COMP remained slightly higher but similar to that of groundwater throughout the pilot study. SAR in the recycled water and L5-COMP were stable to an extent with moderate variability. SAR in recycled water and L5-COMP were similar suggesting that ions in the pore water were in equilibrium with ions in the clay surfaces in the first five feet over the study period. This suggests that clays may have been have swelled to some degree in the first five feet prior to the pilot study. The difference in SAR between L5-COMP and L10-COMP indicates the pore water composition is different. This suggests a clay swelling wave front occurring between the five and ten foot depth during the study period. The presence of clay swelling may present a concern for soil drainage. However, because the effect of clay swelling could not be measured, the level of impact could not be determined.

Summary of Median [Minimum - Maximum] Data for SAR (unitless)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	4.13 [3.3 - 5.11]	-	-	0.82 [0.74 - 0.95]
Sample Events		3.58 [2.68 - 4.17]	1.12 [0.98 - 1.22]	0.8 [0.62 - 0.92]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.2.8. Calcium

Calcium was highest in L5-COMP, followed by L10-COMP, groundwater, and recycled water which had consistently the lowest concentration. Pore water at the five-foot depth had calcium concentrations significantly higher than recycled water. The high levels of calcium found in L5-COMP are potentially caused by displacement in the soil by exchange of calcium for sodium within the uppermost five feet. The increase at the IDT site may also be as a result of water loss from evapotranspiration and thus concentrating the constituent. Calcium in the pore water at the ten-foot depth was lower than at the five-foot depth. The difference in concentrations between the two depths diminished over time. Calcium decreased over time seen in the L5-COMP which is potentially a result of an initial flushing of calcium from the surface soil. A subsequent increase in calcium concentrations in groundwater from flushing was not consistently observed during the pilot study. The removal over time lessened as the system approached equilibrium. In the bench test, calcium behaved in a similar manner in the soil cores, exhibiting an initial concentration increase in the effluent followed by a return to influent levels.

Calcium concentrations in groundwater and recycled water were stable over time. In addition to recycled water, minor amounts of calcium from fertilizer (Best® Nitra King® 19-4-4 with 2.2% Iron) applied regularly in the fall (October and November) contributed to calcium at the soil surface. Calcium contributes to the total dissolved solids of the system.

Summary of Median [Minimum - Maximum] Data for Calcium (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	54 [44 - 64]	-	-	87.75 [62 - 122]
Sample Events		180 [120 - 270]	150 [120 - 170]	85 [49 - 120]
Mann-Kendall Trend	None	Down	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.2.9. Magnesium

Magnesium was highest in L10-COMP followed by L5-COMP, groundwater, and recycled water. Higher magnesium concentrations in the lysimeters compared to the recycled water maybe a result of displacement in the soil by exchange of magnesium for sodium. At the groundwater depth, magnesium concentrations were consistently lower than in L10-COMP. The increase from recycled water to vadose zone water at the IDT site may also be as a result of water loss from evapotranspiration and thus concentrating the constituent. In the bench test, magnesium behaved in a similar manner in the soil cores, exhibiting an initial concentration increase in the effluent followed by a return to levels closer to the influent concentration.

Magnesium concentrations in groundwater and recycled water locations were generally stable over time. Magnesium in L5-COMP and L10-COMP decreased 34% and 25% respectively over the 18-month study period. The gradual decrease over time seen in the lysimeters suggests an initial flushing of the magnesium leached from the soil, followed by a gradual adjustment to equilibrium. A subsequent increase in magnesium concentrations in groundwater from flushing was not consistently observed during the pilot study. Magnesium concentrations in recycled water are consistently lower than those observed in the subsurface samples. Magnesium contributes to the total dissolved solids of the system.

Summary of Median [Minimum - Maximum] Data for Magnesium (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	30 [25 - 39]	-	-	52.95 [36 - 73.1]
Sample Events		81.5 [53 - 100]	110 [98 - 130]	51.5 [30 - 73]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.2.10. Sodium

Sodium concentrations were highest in L5-COMP followed by recycled water, L10-COMP, and groundwater. Sodium levels increased from recycled water to L5-COMP potentially due to water loss from evapotranspiration. Sodium levels decreased in the pore water from the five-foot depth to the ten-foot depth. At the groundwater depth, sodium decreased modestly relative to the ten foot depth. Over time, sodium concentrations in all locations were stable. In the bench test, sodium generally exhibited little to no change in concentrations in the influent and core effluent samples. The differences in observations seen between the bench test and pilot study may potentially be due to the bench test being closer to equilibrium with respect to sodium concentrations compared to the pilot study. Sodium also contributes to the total dissolved solids of the system.

Summary of Median [Minimum - Maximum] Data for Sodium (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	140 [120 - 210]	-	-	40.55 [32 - 47.8]
Sample Events		240 [140 - 290]	72.5 [63 - 87]	37.5 [23 - 48]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.3. Nutrients

4.1.3.1. Phosphate- Total as P

Phosphate was highest in the recycled water compared to the pore water and groundwater. Phosphate from fertilizer applied onsite may have also contributed to concentrations found in the subsurface in addition to the phosphate from recycled water.

Phosphate concentrations found in the groundwater were similar in magnitude to those found in the lysimeters with the exception of a few isolated high concentrations. Phosphate concentrations in MW-2 (10/2008) and in MW-1 (12/2009 and 3/2010) were higher than in recycled water, and were not consistent with either the other groundwater phosphate concentrations on those dates or with the phosphate concentrations from those wells on other sampling dates. With respect to depth, phosphate decreased between the applied recycled water and the pore water at five-foot depth. A significant cause of this concentration reduction may be attributed to root uptake of this nutrient and precipitation of phosphate. Between five and ten feet, an additional slight removal of phosphate was observed. In the bench, phosphate behaved similarly, exhibiting a significant decrease from the influent samples to the effluent samples. The Mann-Kendall trend analysis did not indicate any statistically significant upward or downward trends over time.

Considering the level of phosphate attenuation within the upper ten feet of soil at the IDT site, phosphate appears to have minimal potential to impact groundwater.

Summary of Median [Minimum - Maximum] Data for Phosphate, Total as P (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	0.32 [0.21 - 0.62]	-	-	-
Sample Events		0.0485 [0.031 - 0.21]	0.042 [ND 0.03 - 0.062]	0.0625 [ND 0.03 - 0.86]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.3.2. Nitrate and Nitrite

Nitrate was highest in recycled water followed by groundwater, L10-COMP, and L5-COMP. With respect to depth, nitrate decreased dramatically at the five-foot depth compared to the recycled water, likely as a result of root uptake, even with contributions of nitrate from fertilizer to the soil surface.

Comparing the five and ten foot depth results, nitrate showed a moderate increase with depth in the pilot study. Nitrate concentrations at ten feet and groundwater are similar. The increase in nitrate observed between the five and ten foot depth is suspected to be a result of nitrate returning to equilibrium after depletion near the surface due to root uptake. Nitrate concentrations in the recycled water appeared generally stable with moderate fluctuation.

Over time, nitrate in the pore water increased slightly as seen in L10-COMP. Generally, nitrate in the groundwater did not show any statistically significant upward or downward trend. MW-2 was an exception to this case where nitrate trend was downward.

In the bench test, nitrate concentrations suggested that there was removal of nitrates in the soil even though the root uptake pathway was not present. Those changes may have been caused by nitrate transformation.

Summary of Median [Minimum - Maximum] Data for Nitrate as N (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	10 [7.7 - 15]	-	-	5.65 [3.3 - 10]
Sample Events		1.34 [ND 0.1 - 2.3]	2.25 [1.7 - 3.4]	2.95 [1.6 - 8.2]
Mann-Kendall Trend	None	None	Up	MW-1: None MW-2: Down MW-3: None MW-4: None

Nitrite concentrations were found to be highest in recycled water. Nitrite was detected only once in the groundwater and was not at all detected in the lysimeters. The behavior suggests transformation of nitrites to nitrates by nitrifying bacteria in the initial depth of soil. At the five foot depth, nitrite concentrations were at levels below detection. Given the decrease in nitrate concentrations in the vadose zone (likely due to root uptake) and the lack of nitrite in the subsurface, neither of these constituents appears to have the potential to impact groundwater as a result of recycled water application for irrigation. Note that there is mobility of nitrate when the root uptake pathway does not capture all the nitrogen. This may occur when fertilizer is over applied and/or when vegetation is absent. In these cases, excess nitrate can travel to groundwater.

Summary of Median [Minimum - Maximum] Data for Nitrite as N (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	0.13 [ND 0.15 - 0.85]	-	-	ND 0.4 [ND 0.15 - ND 0.4]
Sample Events		ND 0.05 [ND 0.05 - ND 0.1]	ND 0.05 [ND 0.05 - ND 0.1]	ND 0.05 [ND 0.05 - 0.15]
Mann-Kendall Trend	None	Down	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.4. Anthropogenic Compounds

4.1.4.1. Trihalomethanes (THMs)

THM concentrations (bromodichloromethane, bromoform, chloroform, and dibromochloromethane) were consistently found to be highest in the recycled water. With respect to depth, the concentrations of all THMs decreased dramatically comparing recycled water to the pore water at five feet bgs suggesting effective removal in the soil. Below five feet, THMs were detected infrequently. THM removal could be partly attributed to volatilization from the irrigation spray process and in the vadose zone. THMs were not detected in the groundwater throughout the pilot study. THMs, specifically bromodichloromethane and chloroform, were only once detected in the lysimeters in September 2009 (sixth sampling event). THMs were not detected in the pore water in the subsequent events.

In the bench test, THMs exhibited a similar behavior. Generally, THMs in the effluent samples were lower in concentration than the influent samples.

Overall, the lack of THMs beyond five feet suggests a significant level of attenuation in the soil and minimal potential to impact groundwater.

Summary of Median [Minimum - Maximum] Data for Bromodichloromethane (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	10 [7.8 - 27]	-	-	ND 0.5 [ND 0.5 - ND 0.5]
Sample Events		ND 0.5 [ND 0.5 - 0.7]	ND 0.5 [ND 0.5 - 0.7]	ND 0.5 [ND 0.5 - ND 0.5]
Mann-Kendall Trend	None	None	None	MW-1: None - All Ties MW-2: None - All Ties MW-3: None - All Ties MW-4: None - All Ties

Summary of Median [Minimum - Maximum] Data for Bromoform (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	1.3 [0.6 - 2.9]	-	-	ND 0.5 [ND 0.5 - ND 0.5]
Sample Events		ND 0.5 [ND 0.5 - ND 42]	ND 0.5 [ND 0.5 - ND 0.5]	ND 0.5 [ND 0.5 - ND 0.5]
Mann-Kendall Trend	None	None	None - All Ties	MW-1: None - All Ties MW-2: None - All Ties MW-3: None - All Ties MW-4: None - All Ties

Summary of Median [Minimum - Maximum] Data for Chloroform (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	12 [7 - 23]	-	-	ND 0.5 [ND 0.5 - ND 0.5]
Sample Events		ND 0.5 [ND 0.5 - 1.1]	ND 0.5 [ND 0.5 - 1.7]	ND 0.5 [ND 0.5 - ND 1]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

Summary of Median [Minimum - Maximum] Data for Dibromochloromethane (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	5.3 [3.9 - 14]	-	-	ND 0.5 [ND 0.5 - ND 0.5]
Sample Events		ND 0.5 [ND 0.5 - 0.8]	ND 0.5 [ND 0.5 - 0.7]	ND 0.5 [ND 0.5 - ND 0.5]
Mann-Kendall Trend	None	None	None	MW-1: None - All Ties MW-2: None - All Ties MW-3: None - All Ties MW-4: None - All Ties

4.1.4.2. Volatile Organic Carbons (VOCs)

Volatile organic carbons (VOCs), excluding THMs, were not detected in the recycled water. VOCs, including those discussed in Volume I (xylenes and carbon tetrachloride), were not detected in recycled water or the other sample locations. VOCs were not recommended for further monitoring in Volume I, but were included in the pilot study because they are reported as a part of the analysis (EPA 8260B) that also analyzes THMs. Trichloroethylene, cis-1,2-dichloroethene, and Freon 113 were detected in the groundwater.The source of trichloroethylene, cis-1,2-dichloroethene, and Freon 113 in the groundwater is not known, but these VOCs and its parent products were not detected in the recycled water and hence are not are not a result of recycled water application. The lack of detection indicates that VOCs did not pose a concern for groundwater impacts due to recycled water irrigation during the pilot study.

4.1.4.3. Haloacetic Acids (HAA6)

Haloacetic Acids (HAA6) include bromochloroacetic acid (BCAA), dibromoacetic acid (DBAA), dichloroacetic acid (DCAA), monobromoacetic acid (MBAA), monochloroacetic acid (MCAA), and trichloroacetic acid (TCAA). The most prominent HAA6 in recycled water was DCAA followed by TCAA, BCAA, MCAA, and DBAA. MBAA was not detected in any samples (recycled water source, monitoring wells, or lysimeters) during the pilot study.

Throughout the pilot study, TCAA and BCAA were detected only in recycled water, and not in any of the subsurface samples. MCAA, DCAA, and DBAA were detected in the lysimeters from September to December 2009, approximately 12 to 14 months after recycled water implementation. The appearance of these constituents in the lysimeters well into the study period indicates a slow migration through the vadose zone. In groundwater, only one HAA6 was detected throughout the pilot study. MCAA was detected in groundwater at MW-2 in the final sampling event. No other HAA6 constituents were detected in the groundwater. In the bench test, HAA6 were mixed in results exhibiting increases and decreases in the influent and effluent samples. The varying results in the bench test were attributed to fluctuative concentrations of HAA6 in the recycled water influent. Attenuation of HAA6 in the bench test was not well observed. From the pilot study, it appears that concentrations of HAA6 may continue to increase further over time. Overall, HAA6 was detected in the lysimeters toward the end of the pilot study and suggests potential to impact pore water and groundwater over longer time frames.

Data qualifier flags that were encountered in the haloacetic acids results in the pilot study include the "J" and "P" flags. A discussion of the flags is found in Section 4.2.4. Both of these flags reduce confidence in the quantification of the constituent concentrations but do not negate the fact that the constituent was detected in those samples. Since the above findings rely more on the presence of HAA6 rather than the quantified concentrations, these findings are not affected by the qualified data.

Summary of Median [Minimum - Maximum] Data for Bromochloroacetic Acid (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	0.92 J [ND 0.99 - 9.6]	-	-	ND 1 [ND 1 - ND 1]
Sample Events		ND 1 [ND 1 - ND 1]	ND 1 [ND 1 - ND 1]	ND 1 [ND 0.99 - ND 1]
Mann-Kendall Trend Data	None	None - All Ties	None - All Ties	MW-1: None MW-2: None - All Ties MW-3: None MW-4: None

Summary of Median [Minimum - Maximum] Data for Dibromoacetic Acid (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 1 [ND 0.99 - 3.4]	-	-	ND 1 [ND 1 - ND 1]
Sample Events		ND 1 [ND 1 - 0.17 J]	ND 1 [ND 1 - 0.51 J]	ND 1 [ND 0.99 - ND 1]
Mann-Kendall Trend Data	Down	None	None	MW-1: None MW-2: None - All Ties MW-3: None MW-4: None

Summary of Median [Minimum - Maximum] Data for Dichloroacetic Acid (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	1.8 [ND 1 - 14]	-	-	ND 1 [ND 1 - ND 1]
Sample Events		ND 1 [ND 1 - 0.26 J]	ND 1 [ND 1 - 0.42 J,P]	ND 1 [ND 0.99 - ND 1]
Mann-Kendall Trend Data	None	None	None	MW-1: None
				MW-2: None - All Ties
				MW-3: None
				MW-4: None

Summary of Median [Minimum - Maximum] Data for Monobromoacetic Acid (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 1 [ND 0.99 - ND 1]	-	-	ND 1 [ND 1 - ND 1]
Sample Events		ND 1 [ND 1 - ND 1]	ND 1 [ND 1 - ND 1]	ND 1 [ND 0.99 - ND 1]
Mann-Kendall Trend Data	None	None - All Ties	None - All Ties	MW-1: None
				MW-2: None - All Ties
				MW-3: None
				MW-4: None

Summary of Median [Minimum - Maximum] Data for Monochloroacetic Acid (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 2 [ND 2 - 4.2]	-	-	ND 2 [ND 2 - ND 2]
Sample Events		ND 2 [ND 2 - 1.5 J]	ND 2 [ND 2 - 0.65 J]	ND 2 [ND 2 - 0.26 J]
Mann-Kendall Trend Data	None	None	None	MW-1: None - All Ties
				MW-2: None
				MW-3: None - All Ties
				MW-4: None - All Ties

Summary of Median [Minimum - Maximum] Data for Trichloroacetic Acid (µg/L)

	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	3.3 [ND 0.99 - 9.7]	-	-	ND 1 [ND 1 - ND 1]
Sample Events		ND 1 [ND 1 - ND 1]	ND 1 [ND 1 - ND 1]	ND 1 [ND 0.99 - ND 1]
Mann-Kendall Trend Data	None	None - All Ties	None - All Ties	MW-1: None
				MW-2: None - All Ties
				MW-3: None
				MW-4: None

4.1.4.4. N-Nitrosodimethylamine (NDMA)

NDMA concentrations were found to be highest in recycled water samples followed by lysimeters and the groundwater. The NDMA concentrations in recycled water measured at the site varied from 240 to 460 ng/L. The concentration in the recycled water sample collected directly from the SJ/SC WPCP plant for the baseline event was 112 ng/L. A previous study reported NDMA levels at the SJ/SC WPCP plant ranging from 50 to 360 ng/L (Sedlak et al., 2005). NDMA concentrations decreased dramatically between the recycled water source and the pore water at five feet bgs. The majority of this removal is suspected to be caused by volatilization during application by spray irrigation, where the water receives the most exposure to the atmosphere. Removal can also occur from degradation, plant uptake from the soil, and gas phase diffusion in the soil (Gan et al., 2006, Arienzo et al. 2006). However, volatilization in the vadose zone is reduced in soils that have high water content because of less exposure to air in the pore spaces. The clayey soils at the pilot study site appear to be moist, however this was not measured. Installation of soil moisture probes in future studies may provide information for correlation to NDMA volatilization.

NDMA concentrations at five feet and ten feet were similar. NDMA was detected in the pore water starting with the first sampling event, but the pore water concentrations gradually declined over time as seen in L10-COMP. NDMA in MW-1 showed a statistically significant upward trend over time. On three occasions, NDMA was found in the pore water samples above the California notification level for NDMA of 10 ng/L.

NDMA was detected in the groundwater starting with the fourth sampling event at concentrations near the laboratory reporting limit of 2 ng/L. By the seventh and eighth sampling events, NDMA was detected at low concentrations in three of the four monitoring wells. The NDMA concentrations in groundwater remained below the notification level throughout the pilot study.

Data qualifier flags that were encountered in the NDMA results in the pilot study include the "D," "BB," "BD," "L3," "S7," and "R4" flags. A discussion of the flags is found in Section 4.2.4. Some of these qualifiers ("BB", "BD", "L3") only affected certain samples from the second sampling event. Of the affected samples, all were below detection except one (IDT source), and the qualified concentration was similar to the other concentrations in the IDT source. The "D" flag only affected one sample from the IDT source in the fifth sampling event, and that result was also consistent with other concentrations in the IDT source. The "S7" and "R4" flags raise concerns regarding the accuracy of concentrations. However, both of these flags were only applied to samples where NDMA was not detected. Therefore, the accuracy does not impact the findings.

In the bench test, attenuation of NDMA was not consistently observed. NDMA exhibited both increases and decreases in the effluent samples in the bench test. The difference in observations could be that exposure to the atmosphere was minimized in the bench test hence limiting removal by volatilization. In the pilot study, conditions allowed for exposure to the atmosphere.

Although it is suspected that there is some attenuation of NDMA caused by volatilization, NDMA could still present a potential threat to groundwater.

Summary of Median [Minimum - Maximum] Data for N-Nitroso Dimethylamine (NDMA) (ng/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	380 BB,BD,L3 [112 - 460]	-	-	ND 1001 [ND 1.9 - ND 4800]
Sample Events		ND 2 [ND 2 - 10]	4.15 [ND 2 - 23]	ND 2 [ND 2 - 4.1]
Mann-Kendall Trend	None	None	Down	MW-1: Up MW-2: None MW-3: None - All Ties MW-4: None

4.1.4.5. Terbuthylazine

Terbuthylazine was detected only once in the recycled water during the course of the pilot study, at the reporting limit of 0.1 µg/L. After the baseline sampling event, terbuthylazine was monitored only in the recycled water source because continued monitoring in the subsurface would not yield useful data for a constituent that is detected infrequently. In the bench test, terbuthylazine was not detected in the influent or effluent samples. Because terbuthylazine is not prominent in the recycled water source, the attenuation behavior was not observed.

Summary of Median [Minimum - Maximum] Data for Terbuthylazine (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 0.1 [ND 0.1 - 0.1]	-	-	ND 0.1 [ND 0.1 - ND 0.1]
Sample Events		-	-	-
Mann-Kendall Trend	None	-	-	-

4.1.4.6. Perfluorochemicals (PFCs)

The three PFCs monitored in the pilot study were perfluorobutanoic acid (PFBA), perfluorooctanesulfonate (PFOS), and perfluorooctonoic acid (PFOA). PFOS and PFOA were consistently observed to be highest in the recycled water compared to the subsurface samples. One sample collected directly from SJ/SC WPCP did not detect PFCs. PFCs were consistently detected in the recycled water at the pilot study site. In the subsurface samples for the pilot study, PFOS was detected sporadically in the lysimeters and the groundwater at low concentrations. PFOA appeared more consistently in L5-COMP and sporadically in the L10-COMP and the groundwater. With respect to depth, PFOS and PFOA concentrations were significantly lower at the five foot depth compared to the recycled water. Concentrations of PFOS and PFOA were not significantly different between the lysimeters and groundwater. Although no clear trend over time was observed for PFOS or PFOA in the subsurface samples, their presence in the subsurface suggests the potential to migrate to groundwater. In the bench test, PFBA and PFOS were consistently below detection in the SJ/SC WPCP source sample, but were observed in the effluent of one of the soil cores. PFOA was detected in the SJ/SC source samples, but was observed at higher concentrations in the effluent of all of the soil cores irrigated with recycled water. These concentration increases during the bench test were attributed to PFC formation from chemical precursors.

In the pilot study, PFBA was detected only once in the recycled water source, but was detected frequently in the pore water at five feet and once in the pore water at ten feet. PFBA was not detected in groundwater throughout the pilot study. PFBA showed a statistically significant downward trend over time in L5-COMP. The appearance of PFBA in the pore water may be the result of transformation from chemical precursors, which include various fluorinated alcohols and other fluorochemicals. Overall, detections of PFCs in subsurface samples suggest that there is some potential for PFCs in recycled water to impact groundwater.

The baseline event for this study did not detect PFCs in the groundwater at the site. The PFCs in the shallow pore water could not have originated from Coyote Creek, because there is no lateral movement through the vadose zone, and the elevation of the pore water samples (5 feet and 10 feet below ground surface) is above the water level in Coyote Creek.

The only data qualifier flag that was applied to the PFC results in the pilot study was the "D" flag, which affected only results from the IDT source samples in the second and fifth sampling event. A discussion of the "D" flag is found in Section 4.2.4. Although there is some reduced confidence in the quantification of those concentrations, the data appear to be consistent with other samples from the same source, and are still appropriately useful for comparative purposes. Therefore, they are still used for evaluation in this study.

Summary of Median [Minimum - Maximum] Data for Perfluorochemicals (PFBA) (ng/L)

	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 20 [ND 20 - 12]	-	-	ND 50 [ND 50 - ND 50]
Sample Events		12 [ND 10 - 71]	ND 20 [ND 10 - 28]	ND 20 [ND 10 - ND 20]
Mann-Kendall Trend	None	Down	None	MW-1: None MW-2: None MW-3: None MW-4: None

Summary of Median [Minimum - Maximum] Data for Perfluorochemicals (PFOS) (ng/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	46 D [ND 50 - 87]	-	-	ND 50 [ND 50 - ND 50]
Sample Events		ND 5 [ND 5 - 9]	ND 5 [ND 5 - 6]	ND 5 [ND 5 - 13]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

Summary of Median [Minimum - Maximum] Data for Perfluorochemicals (PFOA) (ng/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	61 [ND 20 - 100]	-	-	ND 20 [ND 20 - ND 20]
Sample Events		3.2 [ND 5 - 17]	ND 5 [ND 5 - 13]	ND 5 [ND 5 - 15]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

4.1.4.7. NTA and EDTA

Nitrilotriacetic acid (NTA) and ethylenediaminetetraacetic acid (EDTA) were not detected in any samples during the pilot study. The reporting limit for each constituent was 100 µg/L. After the second sampling event, NTA monitoring was discontinued, and EDTA monitoring was conducted only for the recycled water source. In the bench test, NTA was also consistently below detection in both influent and effluent samples. In the bench test, EDTA exhibited increases and decreases in concentration in the effluent compared to the influent. Due to the lack of detection of NTA in the recycled water in the pilot study, the attenuation behavior could not be observed. For EDTA, detections were not observed in the pilot study and attenuation was not consistently observed in the bench test.

Summary of Median [Minimum - Maximum] Data for Nitrilotriacetic acid (NTA) (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 100 [ND 100 - ND 100]	-	-	ND 100 [ND 100 - ND 100]
Sample Events		-	-	-
Mann-Kendall Trend	-	-	-	-

Summary of Median [Minimum - Maximum] Data for Ethylenediaminetetraacetic acid (EDTA) (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 100 [ND 100 - ND 100]	-	-	ND 100 [ND 100 - ND 100]
Sample Events		ND 100 [ND 100 - ND 100]	ND 100 [ND 100 - ND 100]	ND 100 [ND 100 - ND 100]
Mann-Kendall Trend	None - All Ties	-	-	-

4.1.4.8. Surfactants

During the pilot study, surfactants were detected only once in the recycled water source, during the baseline sampling event. After the second sampling event, monitoring of surfactants was conducted only for the recycled water source. The reporting limit was 0.2 µg/L for surfactants. Additional surfactants from the AquatrolsSisteen 90 additive contributed to surfactants on the surface. However, there were no detections in L5-COMP in the two events that it was monitored. Attenuation behavior in the pilot study could not be observed, since detection of this constituent was infrequent.

In the bench test, surfactants exhibited increases and decreases in the effluent samples compared to the influent samples. From the results in the bench test, the attenuation of surfactants was not consistently observed.

Summary of Median [Minimum - Maximum] Data for Surfactants (MBAS) (mg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 0.2 [ND 0.2 - 0.21]	-	-	ND 0.1 [ND 0.1 - ND 0.1]
Sample Events		ND 0.2 [ND 0.2 - ND 0.2]	ND 0.2 [ND 0.2 - ND 0.2]	ND 0.2 [ND 0.2 - ND 0.2]
Mann-Kendall Trend	None - All Ties	-	-	-

4.1.4.9. Perchlorate

Perchlorate was not detected in two samples of recycled water collected for the baseline and first sampling events. After the first sampling event, perchlorate was removed from the monitoring program due to the lack of detection in the recycled water source. Perchlorate was detected in one of the monitoring wells during the baseline sampling event, but since that concentration was observed prior to recycled water application, it is not considered relevant to this study. Similarly, perchlorate was not detected in the influent or effluent samples in the bench test. The reporting limit was 4 µg/L for perchlorate. Because perchlorate is not prominent in the recycled water source, the attenuation behavior was not observed, however the lack of detection suggests that perchlorate does not pose a concern for groundwater impacts due to recycled water irrigation.

Summary of Median [Minimum - Maximum] Data for Perchlorate (µg/L)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 4 [ND 4 - ND 4]	-	-	ND 4 [ND 4 - 4.3]
Sample Events		-	-	-
Mann-Kendall Trend	-	-	-	-

4.1.5. Pathogens

Pathogens were evaluated by observing bacteria and indicator organisms. Specific parameters observed were heterotrophic bacteria by heterotrophic plate count (HPC), fecal coliforms, total coliform, and E. coli. All of these parameters were observed in recycled water at some point during the pilot study.

Bacteria by HPC, total coliforms, and fecal coliforms were also detected in pore water samples. In groundwater, only HPC and total coliforms were observed. Overall, attenuation of bacteria and indicator organisms were not well observed in the pilot study.

Detectable levels of HPC were consistently observed across the soil depth. Generally, HPC levels did not exhibit a clear trend with respect to depth. On some occasions, bacterial growth in recycled water measured by HPC was shown to be several orders of magnitude higher than the reporting limit. These changes in HPC in the recycled water source did not appear to correlate to any changes in the subsurface samples. In pore water and groundwater, HPC showed some fluctuation over time, but did not show any trend over time. In the bench test, major bacterial growth, as indicated by HPC, was observed in the influent and effluent samples.

Data qualifier flags that were encountered in the HPC results in the pilot study include the "D" and "T" flags, both of which were applied only to samples from the eighth sampling event. A discussion of the flags is found in Section 4.2.4. Although there is some reduced confidence in the quantification of those HPC results, the data are still appropriately useful for comparative purposes and are therefore used for evaluation in this study. None of the above findings for HPC are dependent on observed concentrations in the eighth sampling event.

Summary of Median [Minimum - Maximum] Data for Heterotrophic Plate Count (CFU/ 1mL)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	6300 [<1 D - >57000]	-	-	646 [65 - 2000]
Sample Events		3650 [560 - 10000]	2150 [300 - 3400]	1550 [220 - 11000]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

Total coliform detection was most prominent at L5-COMP although detection was inconsistent. Total coliforms were found sporadically at all locations. The frequency of relatively high levels of total coliforms in the subsurface samples appears to correlate to the winter season when rainwater becomes the primary irrigation source. Because rainwater is not a chlorinated source, bacteria is allowed to grow. During winter 2009/2010, there appears to be an increased frequency of elevated total coliform values compared to winter 2008/2009. Continued monitoring through additional seasons would be needed to determine whether the increasing total coliform values are related to the application of recycled water. Daily samples of total coliform taken at the SJ/SC plant in 2009 ranged from less then 1 to 5 CFU/100mL.

Summary of Median [Minimum - Maximum] Data for Coliforms, Total (MPN/ 100 mL)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	18 [ND 2 - 24]	-	-	1 [ND 2 - 11]
Sample Events		2 [ND 2 - 240]	1 [ND 2 - 81]	ND 2 [ND 2 - 140]
Mann-Kendall Trend	None	None	None	MW-1: None MW-2: None MW-3: None MW-4: None

Fecal coliforms were found at highest levels in the recycled water, however detection was not consistent. Lower detections of fecal coliforms appeared in the pore water during two monitoring events. However, there is no clear trend in these concentrations over time. Fecal coliforms were not observed in the groundwater. E. coli was detected only once in the recycled water. E. coli was not detected in the pore water or groundwater during the pilot study. Overall, there is some evidence suggesting that pathogens in recycled water (particularly as indicated by total coliforms) could have the potential to impact groundwater. However, contributions of coliforms and other indicator bacteria from rain water and from the nearby creek were not evaluated.

Summary of Median [Minimum - Maximum] Data for Fecal Coliforms (MPN/ 100 mL)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 2 [ND 2 - 24]	-	-	ND 2 [ND 2 - ND 2]
Sample Events		ND 2 [ND 2 - 2]	ND 2 [ND 2 - 2]	ND 2 [ND 2 - ND 2]
Mann-Kendall Trend	None	None	None - All Ties	MW-1: None - All Ties MW-2: None - All Ties MW-3: None - All Ties MW-4: None - All Ties

Summary of Median [Minimum - Maximum] Data for E. Coli (MPN/ 100 mL)				
	Recycled Water	Pore Water (5ft bgs)	Pore Water (10ft bgs)	Groundwater
Baseline	ND 2 [ND 2 - 8]	-	-	ND 2 [ND 2 - ND 2]
Sample Events		ND 2 [ND 2 - ND 2]	ND 2 [ND 2 - ND 2]	ND 2 [ND 2 - ND 2]
Mann-Kendall Trend	None	None - All Ties	None - All Ties	MW-1: None - All Ties MW-2: None - All Ties MW-3: None - All Ties MW-4: None - All Ties

4.2. Quality Assurance/Quality Control

Field QA/QC samples were collected to assess the potential for contamination associated with field sampling equipment, containers, and procedures. The field QC samples that were collected are discussed in the following subsections. Although some data collected for this pilot study were qualified as discussed below, after evaluation with respect to the specific conclusions drawn, it was determined that these qualifications do not substantially affect the interpretation or conclusions derived from the data.

4.2.1. Field Duplicates

Duplicate samples were submitted "blind" to the laboratory using a numeric identification and were analyzed for the same parameters as those specified for the primary sample. Results of duplicate samples are presented in Table III-4-3. Primary sample results associated with the field duplicate are also included in the Table III-4-3 for comparison. One field duplicate was collected for every 20 samples. Field duplicates are marked with an "FD". Duplicate samples of the recycled water source (IDT source) were collected in four sampling events throughout the pilot study and in the baseline event. The majority of the duplicate samples were found to be within reasonable range of the project sample, indicating reliability in the laboratory analysis methods for the pilot study. Issues with field duplicates occurred with HPC (one sample in the eighth sampling event), NDMA (one sample in the fifth sampling event) and PFCs (one sample each in the second and fifth sampling event). In cases where the duplicate sample was out of range (relative percent difference (RPD) > 25% to the primary sample), a "D" flag was associated with the project sample result in Table III-4-1.

The RPD exceedance for HPC was 102 percent for the sample from the IDT source in the eighth sampling event. Because of the biological nature of the HPC analysis, results for HPC can vary significantly compared to other analyses. Although there is a reduced confidence in the quantification of this result, the data are still appropriately useful for comparative purposes because HPC variability within this range is not generally considered significant.

The RPD exceedance for NDMA was 37 percent for the sample from the IDT source in the fifth sampling event. This exceedance occurred only once out of the four sampling events that included field duplicates. Although there is some reduced confidence in the quantification of this result, the qualified value is consistent with other concentrations from the IDT source. Additionally, the findings for NDMA are based on concentration differences exceeding 37 percent (see Section 4.1.4.4). Therefore the uncertainty associated with this data qualification does not impact the NDMA findings.

For PFCs, the RPD exceedance for PFOS was 41 percent in the second sampling event and 26 percent in the fifth sampling event. The RPD exceedance for PFOA was 41 percent in the second sampling event. These RPD exceedances applied only to the IDT source samples. There were no RPD exceedances for PFBA. This type of exceedance occurred in two out of the four sampling events with field duplicates. Although there is a reduced confidence in the quantification of these concentrations, the findings of the study regarding PFCs rely primarily on the frequency and locations of detection rather than the quantified concentrations (see Section 4.1.4.6). Therefore the potential for inaccurate quantification of these concentrations does not substantially impact the findings.

4.2.2. Trip Blanks

Trip blanks are used to assess potential cross-contamination of constituents among samples. One trip blank accompanied every 20 samples. The trip blanks consisted of containers filled with deionized water. Results of trip blanks are also presented in Table III-4-3. Trip blanks were collected in four sampling events throughout the pilot study. The majority of the trip blank samples were found below detection, indicating reliability in the sample delivery. Trip blanks with detections occurred with HPC, sodium, alkalinity, and DOC. A detection in the trip blank does not necessarily indicate an issue of quality. If the associated sample results are greater than the concentration detected in the trip blank, the detection in the trip blank would have no effect on the sample results. In instances where the trip blank sample caused an issue of quality, a "T" flag was placed with the associated sample results in Table III-4-1.

For both sodium and alkalinity the concentrations in the trip blanks were much lower than concentrations of the primary samples, such that the primary samples would not be affected. Hence, "T" flags were not assigned to any samples from these constituents.

For DOC, a "T" flag was not assigned to any DOC results from that event because there were no quantifiable results that were below were that had a lower concentration than the trip blank result. For HPC, a "T" flag was assigned to only the HPC result from MW-4 from the eighth sampling event. Although there is some reduced confidence in the quantification of these concentrations, the data are still relevant and used in the study for evaluation purposes.

4.2.3. Rinseate Blanks

A rinseate blank was collected to assess the quality of field decontamination procedures particularly with respect to volatile organic carbons (VOCs). This sample was submitted "blind". No detection was reported for this sample, indicating proper field decontamination procedures.

4.2.4. Flags

Below is a discussion of the different data qualifier flags that have appeared in the pilot study analytical data and any implications for the qualified data. Implications of these flags on the findings are discussed with the analytical results in Section 4.1.

4.2.4.1. "B"

The "B" flag is defined as a low recovery in the matrix spike (MS) and matrix spike duplicate (MSD). The associated relative percent difference (RPD) is out of laboratory limits. The purpose of the MS and MSD is to identify method performance and precision. This flag was applied once for the dissolved organic carbon analysis of L5-COMP in the sixth sampling event.

4.2.4.2. "BB"

The "BB" flag is defined as detection in the associated method blank at or above the laboratory minimum reporting limit (MRL). There is no impact on the reported result due to the "BB" flag because the target analyte is ten times above the concentration level of the detection found in the method blank.

This flag was applied once for the NDMA result in the IDT source sample in the second sampling event which is also qualified with "BD" and "L3" flags.

4.2.4.3. "BD" and "L3"

The "BD" flag is defined as detection in the associated method blank that is above the California Department of Public Health (CDPH) recommended value of 0.5 and does not meet the internal blank limit of one third the MRL. One third of the MRL for NDMA is 0.7 ng/L.

The "L3" flag indicates that the associated blank spike recovery was above the method acceptance limits. A blank spike identifies the performance of the preparation method on a clean matrix that is void of interferences.

Flags "BD" and "L3" were applied to the NDMA result in the IDT source and monitoring well samples in the second sampling event. The monitoring well results are not affected by these qualifiers because

NDMA was not detected in those samples. These flags may indicate potential uncertainty in the quantification of NDMA in the IDT source sample. However, the result is consistent with the other samples collected from that source and is therefore still considered representative.

4.2.4.4. "D"

The "D" flag indicates that the associated field duplicate sample was out of RPD limits with respect to the primary sample. See Section 4.2.1 for discussion of the field duplicates.

4.2.4.5. "J"

The "J" flag indicates that the constituent is detected but the quantitation is an estimate between the method detection limit and the laboratory reporting limit. Estimated values in this range are at a lower confidence than quantitations at or above the reporting limit.

"J" flags were applied to the haloacetic acids results in the IDT source, L5-COMP, and L10-COMP in the sixth through eighth sampling events, and MW-2 in only the eighth sampling event. A "J" flag was also applied to the bromide result from the L10-COMP location in the first sampling event.

4.2.4.6. "P"

The "P" flag indicates that confirmation criteria were exceeded for the gas chromatography or high-performance liquid chromatography. The RPD was greater than 40% between the two analytical results. All data qualified with the "P" flag were also qualifed with a "J" flag.

The "P" flag was applied to the haloacetic acid results from the IDT source, L5-COMP, and L10-COMP locations in the last two sampling events.

4.2.4.7. "R4"

The "R4" flag indicates that the RPD associated with the MS/MSD exceeded method limits, which is similar to the "B" flag. The purpose of the MS and MSD is to identify method performance and precision.

The "R4" flag was applied to the NDMA result for MW-2 in the sixth sampling event. Since this result was below detection, the quantification of this result is not critical to the findings of the study.

4.2.4.8. "S7"

The "S7" flag indicates that the surrogate recovery was below laboratory and method acceptance limits. The effect to the matrix could not be confirmed. The purpose of surrogate recovery is to demonstrate correct sample preparation and absence of matrix effects in the test method.

The "S7" flag was applied to the NDMA result from the L10-COMP location in the seventh sampling event. Since this result was below detection, the quantification of this result is not critical to the findings of the study.

4.2.4.9. "T"

The "T" flag indicates that there is a detection found in the associated trip blank at a concentration greater than the associated sample. See Section 4.2.2 for discussion on the trip blanks.

4.3. Water Budget of Recycled Water to Vadose Zone

A water budget is included in the pilot study evaluation to estimate the amount of water that may infiltrate the soil. The major finding was that for conservative constituents, concentrations of recycled water were estimated to increase by a factor of two in the vadose zone based on the gains and losses of water alone. This estimate is obtained by using a basic hydrologic budget to estimate of the dilution or concentration of recycled water in the vadose zone. An equation for the hydrologic budget is given by:

$F = Bi - Bo + P - ET - S - R$ Brutsaert, 2005

Where
F = Infiltration rate.
Bi = Boundary in condition. For this case, the irrigation rate is used here.
Bo = Boundary out condition, assumed zero.
P = Precipitation.
ET = Evapotranspiration.
S = Storage, assumed negligible.
R = Surface runoff, assumed negligible.

Storage and surface runoff are taken to be negligible. Precipitation, P, in the central San Jose region was reported at 10.04 inches/year for the 2008/2009 winter season (SCVWD, 2009) and 15.12 inches/year for the 2009/2010 winter season (SCVWD, 2010). The average precipitation from the two seasons is 12.58 inches/year. Irrigation application, Bi, at the IDT site was estimated to be 8,717 ccf / year, or 38.7 inches / year (Pacific Crest Engineering Inc., 2005). ET is calculated using

$ET = Kc \times ETo$ University of California Cooperative Extension, 2000

Where
ET = Crop evapotranspiration.
Kc = Crop coefficient.
ETo = Reference evapotranspiration

Kc of warm season turfgrass is 0.6 (University of California Cooperative Extension, 2000). Warm season turfgrass was assumed for the entire irrigated IDT landscape including shrub beds. ETo in the San Jose region is 49.4 inch / year (CIMIS, 1999). Therefore, ET is calculated to be 29.6 inch / year.

Infiltration rate, F, is calculated from the hydrologic budget to be 21.7 inch / year (or 11.2 acre-ft/year). The concentration of recycled water in the vadose zone is estimated to be roughly a factor of 2. This estimate is obtained by using the ratio of the irrigation application rate (38.7 inches/year) to the infiltration rate (21.7 inches/year). TDS data which is taken to be a relatively conservative parameter, supports this estimate. The TDS concentrations in the pore water at five feet bgs is approximately twice that of the recycled water source concentration.

4.4. Piper Diagram Analysis

Piper diagrams graphically summarize cation and anion data in a composite diamond to visually distinguish differences in ionic water quality. In Figure III-4-49, anions including chloride, sulfate, bicarbonate, and cations including calcium, magnesium, sodium, potassium, are plotted as a percent composition of the anions or cations. Compositions are in terms of percentages of equivalence per volume concentrations.

Points for the baseline and sampling events are plotted out. Groundwater data points are an average of the four monitoring wells. L5-COMP and L10-COMP are plotted individually. Recycled water is plotted as one data point, an average of the water quality of the baseline and sampling events through the pilot study since this source is not expected to vary significantly over time.

Of the cations used in the piper diagram, calcium and magnesium appear to be more dominant in groundwater while sodium and/or potassium appear to be more dominant in the recycled water. For the anions, bicarbonate is the dominant anion in groundwater while recycled water is more dominated by chloride.

Comparing the water composition in the recycled water, groundwater, and the pore water, the diagram shows at shallower depths, the water quality is closer to that of recycled water. Visually, L5-COMP data points are more closely plotted to the recycled water while groundwater tends to be plotted furthest away from recycled water.

Over time, trends of the ionic composition in the pore water and the groundwater tend to show a shift towards the ionic composition of recycled water. This is most evident in L5-COMP which is the shallowest depth; however some shift towards an ion composition in recycled water can be discerned in the groundwater data as well.

Trends identified from the piper diagram analysis indicate that recycled water has contributed to the changes in groundwater within the pilot study period. This agrees with other findings of this study, such as NDMA detections observed in the groundwater.

4.5. Conclusions

4.5.1. Constituent Attenuation

Below is a table summarizing the potential threat to groundwater with respect to each constituent based on findings from the pilot study and bench test. Each constituent is given a rating between 1 and 5, with 5 representing the highest potential threat. The criteria for assigning each threat are the observed attenuation of the constituent in the pilot study and bench test and the type of constituent. In general, the greater the overall attenuation behavior displayed from the bench test and pilot study the lower the potential threat. Also considered is whether the constituent is naturally occurring or has known health impacts. The type of constituent can range from general water quality parameters like alkalinity and DO, to emerging contaminants like NDMA and PFCs. The potential threat assigned for each constituent below includes consideration of these factors. Some monitored constituents were not consistently detected in the recycled water source during the study. Since the attenuation of those constituents could not be evaluated, they are assigned as inconclusive. Further monitoring of recycled water sources is needed to determine whether those constituents are sufficiently present to pose a potential threat to groundwater.

In addition to the potential threat value, the table includes a recommendation on whether further monitoring of each constituent is warranted. Constituents that are recommended for further monitoring are those with a threat value of three or higher or if the constituent has been assigned as inconclusive.

Constituent	**Potential Threat**	**Recommend for Further Monitoring?**	**Findings**
ORP	1	N	ORP is a general water quality parameter. Measurements of ORP suggest no major shifts in redox conditions.
pH	1	N	The pH is a general water quality parameter. The pH was near neutral in the pilot study and bench test. Similarity of pH across depth indicates conditions are stable.
Chlorine, Total	1	N	Concentrations of chlorine were higher in groundwater than in recycled water and pore water in the pilot study.
Dissolved Oxygen	1	N	DO is a general water quality parameter. DO was 0.01 mg/L or above across depth in the pilot study indicating that anoxic conditions are unlikely. Samples from the bench test indicated oxic conditions.
Alkalinity, Total	1	N	Alkalinity is a general water quality parameter. A greater alkalinity in the pore water equates to more stability in pH conditions.
Bicarbonate Alkalinity	1	N	
Boron	3	Y	Boron removal was not well observed in the bench test or pilot study.

Calcium	2	Y (See SAR)	Calcium concentrations are greater in the subsurface than in recycled water.
Magnesium	2	Y (See SAR)	Magnesium concentrations are greater in the subsurface than in recycled water.
Sodium	4	Y	Sodium is directly related to SAR, as well as having a direct potential effect on groundwater.
Sodium Adsorption Ratio (SAR)	4	Y	SAR may indicate impact to soil drainage from clay swelling as a result of recycled water application when the SAR in the recycled water is higher than the SAR of the previous irrigation source.
Potassium	1	N	Potassium data from bench test and pilot study suggest good removal.
Sulfate	3	Y	Sulfate increased in concentration in pore water, likely due to contribution from soil and fertilizer. Sulfate concentration in groundwater was relatively stable in the pilot study. In the bench test, removal was not well observed. The constituent also contributes to the total dissolved solids.
Nitrite	2	N	Nitrate/Nitrite data show removal with depth in the pilot study. Mechanism is suspected to be attenuation by root uptake pathway.
Nitrate	2	N	
Chloride	4	Y	Chloride over time has shown an increasing trend in concentrations in groundwater and pore water. At the end of the pilot study, chloride had not yet reached stable conditions. Attenuation of chloride in the bench test was not well observed. The constituent also contributes to the total dissolved solids.
Total Organic Carbon (TOC)	2	N	TOC was decreased by microbial activity and adsorption to soil; groundwater was relatively stable in pilot study. The bench test findings were consistent with the pilot study.
Total Filterable Residue at 180C (TDS)	3	Y	Although TDS in the pilot study in groundwater appeared relatively stable, levels have been observed above secondary drinking water standards in both the baseline and subsequent events. TDS in recycled water and lysimeters are also above secondary drinking water standards. In the bench test, attenuation was not well observed.
Dissolved Organic Carbon	2	N	DOC was decreased by microbial activity and adsorption to soil; groundwater was relatively stable in pilot study. The bench test findings were consistent with the pilot study.

Bromodichloromethane (THM)	2	N	Bromodichloromethane was removed in the vadose zone. Bromodichloromethane was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.
Bromoform (THM)	2	N	Bromoform was removed in the vadose zone. Bromoform was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.
Chloroform (THM)	2	N	Chloroform was removed in the vadose zone. Chloroform was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.
Dibromochloromethane (THM)	2	N	Dibromochloromethane was removed in the vadose zone. Dibromochloromethane was not detected in groundwater during the pilot study. THM data in the bench test also showed attenuative behavior.
Carbon Tetrachloride (VOC)	1	N	Carbon tetrachloride was not detected in recycled water in pilot study or bench test. The constituent was also categorized as having minimal potential impact in Volume I.
Xylenes, Total (VOC)	1	N	Xylenes were not detected in recycled water in pilot study or bench test. The constituent was also categorized as having minimal potential impact in Volume I.
Additional 8010-list VOCs	1	N	VOCs were not detected in recycled water in the pilot study or bench test. VOCs excluding xylenes and carbon tetrachloride were also not detected in the data analysis of Volume I.
Haloacetic Acids (HAA6): Bromochloroacetic Acid Dibromoacetic Acid Monobromoacetic Acid Monochloroacetic Acid Trichloroacetic Acid	4	Y	HAA6 were not observed in the baseline groundwater samples but were observed in the applied recycled water, pore water, and groundwater during the pilot study. In the bench test, HAA6 attenuation was not well observed. HAA6 are also anthropogenic compounds.
Heterotrophic Plate Count	3	Y	Growth was present in pore water and groundwater. Growth was also observed in the bench test. Attenuation was not observed.
Coliforms, Total	3	Y	Growth was present in pore water and groundwater. Growth was also observed in the bench test. Attenuation was not observed.
Fecal Coliforms	3	Y	Fecal Coliforms were not present in groundwater during the pilot study. In the bench test, fecal coliforms were not frequently detected. Attenuation was not well observed.

E. Coli	Inconclusive	Y	E. Coli was minimally detected in recycled water in the pilot study. In the bench test, E. coli was not frequently detected. Therefore the attenuation behavior could not be examined. The constituent may be present in the other recycled water sources in the study area.
N-Nitroso Dimethylamine (NDMA)	5	Y	NDMA was not observed in the baseline groundwater samples, but was observed in the applied recycled water, pore water, and groundwater during the pilot study. The majority of attenuation of NDMA could potentially be from volatilization in the vadose zone and biotransformation in the soil. In the bench test, NDMA attenuation was not consistently observed. NDMA is an emerging contaminant.
Perfluorochemicals	5	Y	PFCs were not observed in the baseline groundwater samples, but were observed in the applied recycled water, pore water, and groundwater during the pilot study. Similarly, in the bench test, some PFCs were observed in the effluent but not in the influent. There is potential for PFC formation from precursors. PFCs are emerging contaminants.
Phosphate	1	N	Phosphate removal was observed in the pilot study and bench test. Mechanisms that caused removal of phosphates are suspected to be the root uptake pathway and precipitation.
Ethylenediaminetetraacetic acid (EDTA)	3	Y	EDTA was not detected in recycled water in the pilot study. In the bench test attenuation was not consistently observed.
Surfactants (MBAS)	3	Y	Surfactants were minimally detected in recycled water in the pilot study. In the bench test attenuation was not consistently observed.
Bromide	2	Y	Removal of bromide in the vadose zone is low; however the degree of toxicity of bromide is low. Together with chloride, bromide can be a useful tracer for recycled water transport.
Nitrilotriacetic acid (NTA)	Inconclusive	Y	NTA was not detected in the pilot study or bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.
Perchlorate	Inconclusive	Y	Perchlorate was not detected in recycled water during the pilot study or bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.

Cyanide	Inconclusive	Y	Cyanide was minimally detected in pilot study or bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.
Terbuthylazine	Inconclusive	Y	Terbuthylazine was minimally detected in recycled water in pilot study and bench test. Therefore the attenuation behavior could not be fully examined. This constituent may be present in the other recycled water sources in the study area.

4.5.2. Potential for Reduction in Soil Drainage Caused by Soil Aquifer Plugging

The pilot study has shown based on SAR data that the potential for soil aquifer plugging from recycled water use exists. SAR data suggest clay swelling to some degree in the first five feet. This was indicated by the difference in compositions of sodium, magnesium, and calcium at different soil depths. SAR in the pore water at five feet bgs was much higher than SAR at ten feet bgs and below. Values of SAR found in L5-COMP in the first event were similar to the SAR values of recycled water. Because recycled water was implemented between the baseline and first sampling event, it is possible that clays at the IDT site expanded during this time although baseline data of the pore water was not available to prove this conclusively. The change in permeability due to the clay swelling could not be quantitatively measured. Comparatively, a switch to recycled water can only contribute to clay swelling when the water source previously used has a lower SAR than recycled water. Typically, groundwater will have a lower SAR value than recycled water, as was the observed condition for the pilot study.

In the bench test, clay swelling occurred in the fine-grained soil cores. This was determined by comparing the core effluent volumes of the fine-grained soil cores with and without gypsum applied. The fine-grained soil cores which had gypsum applied achieved greater percolation than the fine-grained soil cores. The use of gypsum, which was not implemented at the pilot study site, promotes permeability by introducing calcium to the system, hence lowering SAR. However, constituent transport downward is also promoted.

5. CONCLUSIONS

5.1. Limitations of the Pilot Study

This pilot study was designed to directly monitor the effect of recycled water irrigation on groundwater at the IDT site in the southern part of the Santa Clara Subbasin. For the purpose of the entire recycled water study, the data and conclusions from this pilot study will be extrapolated for application to the entire project study area, which includes all of Santa Clara and Llagas Groundwater Subbasins. To use this information appropriately, it is important to note the factors that limit the applicability of this data set. These factors are described below.

5.1.1. Duration and Scale

The pilot study monitoring program covered a period of approximately 18 months from September 2008 to March 2010. It was observed that some recycled water constituents have the potential to impact groundwater within this time frame. However, other constituents that migrate more slowly may still have the potential to impact groundwater, but on a longer time frame. Examination of the pore water concentrations at five feet and ten feet can be used to extrapolate potential impacts to groundwater over a longer time period. For example, constituents that affected pore water at five feet after 18 months could affect groundwater at 30 feet after 108 months. Similar extrapolations could be used to approximate conditions for differing groundwater depths.

5.1.2. Site Characteristics

The selected pilot study site has surface and subsurface characteristics that are similar to many other areas with the project study area. However, there are many other sites within the project study area with substantially different characteristics. At the pilot study site, only one type of soil was represented (silty clay). As observed in previous phases of this study, the soil type has significant influence on the migration of recycled water constituents. Extrapolation of the pilot study conclusions to other soil types can serve as a guideline or framework for specific sites but will require careful consideration of the differences in infiltration rate and sorption characteristics.

Recycled water irrigation and infiltration at the pilot study were in areas of turf grass and trees/shrubs. The effect of the specific type of landscaping on recycled water constituent migration could not be evaluated in the pilot study. Application of recycled water for irrigation of other landscape types may require consideration of varying evapotranspiration and nutrient intake rates. However, it is not expected that the landscaping for proposed recycled water applications in the project study area would be significantly different from the IDT site. Pilot study data would be most applicable to a similar mix of landscape.

As described previously, some soil additives in use at the pilot study site may have affected the assessment of certain constituents (e.g. sulfate, potassium, phosphate). This information was factored into the pilot study findings for those affected constituents. Changes in the application of fertilizer or other soil additives should be considered when trying to use the pilot study conclusions for other sites. This is especially the case if gypsum is being used. Gypsum was not applied at the pilot study site, but has been shown in previous phases of this study to have a significant impact on recycled water constituent migration (see Volume II).

5.1.3. Recycled Water Source

Since the pilot study was conducted at a single location, only one source of recycled water (SJ/SC WPCP) was evaluated. Previous phases of this study have shown significant variability between the four sources of recycled water within the project study area (see Volume I). Differences in the recycled water constituent concentrations should be evaluated when using the pilot study data for other recycled water sources.

5.2. Comparison to Previous Phases of the Study

5.2.1. Soil Attenuation Model

In Volume II of this report, transport of four constituents (m-Xylene, chloroform, NDMA, and bromodichloromethane) was simulated using a one-dimensional vadose zone transport model. These constituents were chosen for the soil attenuation model based on the presence of these constituents in recycled water and the availability of information regarding their chemical transport properties. Results from the pilot study of chloroform, NDMA, and bromodichloromethane agreed well with the model results in clayey soils. Xylenes were not detected in the recycled water in the pilot study, and therefore could not be compared. For the four constituents, the pilot study and the model showed a dramatic decrease to near zero in concentration in the pore water at five feet bgs as compared to the recycled water. At five feet in the pilot study, detection of these constituents was very low. The model at five feet (~1.5 meters) showed concentrations to be near zero.

One noted difference between these methods is that the top boundary conditions of the model begin at the soil surface. Processes that occur before infiltration such as the volatilization from spray irrigation are not captured in the model. In the pilot study, the irrigation system exposed the water to ambient air before reaching the soil. In addition, the model did not capture degradation and/or transformation of constituents.

5.2.2. Bench Test

In the bench test, soil core SJSC-A was derived from the IDT site where the pilot study took place. SJSC-D was also derived from the IDT site and this sample was tested with gypsum applied at the surface. However gypsum was not used during the pilot study. Due to the low infiltration rate of recycled water of SJSC-A, very little effluent water was derived from this sample during the bench test. Therefore, there was insufficient sample volume to complete most of the analyses. The length of SJSC-A was 12 inches and the duration of the test for this sample was 121 days. The initial hydraulic conductivity (which was not exposed to recycled water) of this core was measured to be 4.7×10^{-6} cm/sec. Observed hydraulic conductivity (exposed to recycled water) of the soil core at the end of the bench test was less than 1.06×10^{-6} cm/sec.

In general, the pilot study data fluctuated less than the data from the bench test. In the bench test there was a high variation in the data which was attributed to the shorter time frame and shorter soil length evaluated. These variations were minimized in the pilot study. In contrast to the bench test, the pilot study was evaluated over 35 foot soil depth and over a study period of 18 months.

For the bench test, a 20% difference was used as a general guideline to define a significant change between influent and effluent concentrations. In the pilot study, a percentage difference was not used in evaluating the data. Instead, trend data were evaluated using Mann-Kendall analysis. The Mann-Kendall analysis is a more statistically robust analysis, and the pilot study provided a sufficient volume of data for this analysis. The bench test used the percentage difference approach because it included only two sampling events, which is not enough to complete a Mann-Kendall analysis.

5.3. Summary of Potential Threat to Groundwater

Based on the results obtained from the pilot study and bench test, the constituents that showed the highest potential to impact groundwater were NDMA, HAA6, and PFCs, due to their appearance in groundwater during the pilot study and lack of presence in the groundwater baseline data. Some results of NDMA found in the pore water were above the California notification level NDMA of 10 ng/L. In the bench test, NDMA removal was not consistently observed. PFCs have appeared in the groundwater and were not present in the baseline sampling event. PFBA in particular was not found in the recycled water but was found in the other sample locations suggesting transformation to PFBA from other products. HAA6 is also a concern because of its presence in the pore water and potential to impact groundwater. Removal of HAA6 was also not observed in the bench test.

Sodium, magnesium, and calcium are other constituents in recycled water that may adversely affect groundwater. Sodium, magnesium, and calcium can limit soil drainage through clay swelling and the pilot study has suggested based on SAR data that the clays in the shallow soil were already expanded. Swelling is likely to occur due to recycled water because other water sources, such as drinking water and groundwater typically have lower SAR values. The change in permeability due to the clay expansion at the site could not be quantitatively measured. Although not used at IDT during the pilot study, the use of gypsum promotes permeability by introducing calcium to the system, hence lowering SAR. However, constituent transport downward is also promoted. In the bench test, it was observed that the application of gypsum greatly improved permeability of the soil.

Constituents that indicated some potential to impact groundwater include TDS, boron, sulfate, chloride, and pathogens. Rising concentrations of chloride in the pore water and groundwater over time during the pilot study present a concern for potential long-term impact and chloride removal in the bench test was not well observed. Some biological constituents, specifically heterotrophic bacteria and total coliforms, were found to be present in the recycled water and to some extent in the pore water and groundwater. Overall there is some evidence from the pilot study suggesting that pathogens in recycled water could potentially impact groundwater. TDS results in groundwater, pore water, and recycled water from the pilot study and effluent in the bench test were found to be above the secondary drinking water standard. Moderately high levels of TDS found in groundwater at the IDT site, as seen in the baseline and pilot study, leave less capacity for further increases in TDS due to incoming recycled water used in irrigation. Boron and sulfate data from the pilot study and bench test suggested that attenuation was low. The soil and fertilizer was likely to contribute to sulfate in the pore water than recycled water alone.

Most constituents indicated only minimal potential to impact groundwater, including phosphate, nitrate, nitrite, potassium, TOC, DOC, and THMs. Major nutrients such as phosphate and nitrate/nitrite appear to be greatly reduced from irrigation when vegetation is present and fertilizer is appropriately used. The plant uptake process is a potential pathway for nutrient removal. TOC and DOC were not observed to reach groundwater in the pilot study.

Potassium and THMs in groundwater appeared stable in the pilot study. THMs were not detected in groundwater. Potassium was detected in groundwater but at concentrations similar to baseline levels. In addition bench test data of potassium and THMs exhibited removal in the soil.

Alkalinity, pH, ORP, DO, and chlorine showed recycled water had negligible potential to impact groundwater through recycled water use. The stability of general parameters (pH, ORP and DO) as seen in the pilot study and bench test indicate that there were no major shifts in conditions. Chlorine measurements in groundwater in the pilot study were generally higher than in recycled water.

VOCs (excluding THMs) were not detected consistently in recycled water in either the bench test or the pilot study and did not pose a potential threat to groundwater at the IDT site. In addition, Volume I of this study found that xylenes and carbon tetrachloride were regarded as having D) minimal potential impact. The data analysis of Volume I also did not find detections of any other VOCs in recycled water.

Cyanide, terbuthylazine, NTA, and perchlorate were not detected consistently in recycled water in either the bench test or the pilot study. Detections that did occur were near or at the reporting limit. In groundwater, only perchlorate was detected once. Because these parameters were not frequently present in the recycled water source at IDT, they did not have impacts to the groundwater at the IDT site. However, the attenuation behavior of these constituents could not be well examined.

EDTA and surfactants were detected in recycled water during the bench test, but were found to not attenuate well. EDTA and surfactants were not consistently detected in the recycled water in the pilot study, thus conclusions from the pilot study could not be made.

The evaluation of potential threats presented in this section is based on the 18-month pilot study conducted at the IDT site. Due to the fairly limited monitoring period for this study, it is possible that the arrival of some constituents did not occur within the pilot study duration. As part of an agreement with the SCVWD, IDT is conducting ongoing groundwater monitoring at the site, and those results should be considered along with the findings of this study to guide future efforts.

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APPENDICES

APPENDIX III-A

SOIL BORING LOGS

Locus
TECHNOLOGIES

BORING LOG

PROJECT NO. 27011-07-3200
BORING NO. SCV-3
LOGGED BY: Norman Wong

PROJECT NAME Recycled Water Study
BORING LOCATION SCV-3 (IDT) SURFACE ELEV.:
DRILLER RSI Drilling START: 5/12/2008, 10:30 FINISH: 5/12/2008, 12:00

DEPTH	SAMPLE NO.	SAMPLE TYPE	INTERVAL FROM	INTERVAL TO	RECOVERY IN INCHES	U.S.C.S SOIL TYPE	CONTACT DEPTH	SOIL DESCRIPTION AND REMARKS	PIEZO.
	SCV-3 0 to 4	soil	0.0	4.0	36	CL		silty clay, brown, dry, roots present,	
5	SCV-3 4 to 8	soil	4.0	8.0	36			moist, less silt, some roots	
10	SCV-3 8 to 12	soil	8.0	12.0	42			less silt, few gravel	
15	SCV-3 12 to 16	soil	12.0	16.0	44			same as above	
20	SCV-3 16 to 20	soil	16.0	20.0	46			same as above	
	SCV-3 20 to 24	soil	20.0	24.0	47			light brown, less moist, some mottling	
25	SCV-3 24 to 28	soil	24.0	28.0	48			very moist, some gravel, some mottling	
30	SCV-3 28 to 30	soil	28.0	30.0	24				
35									
40									

WELL NO. MW1

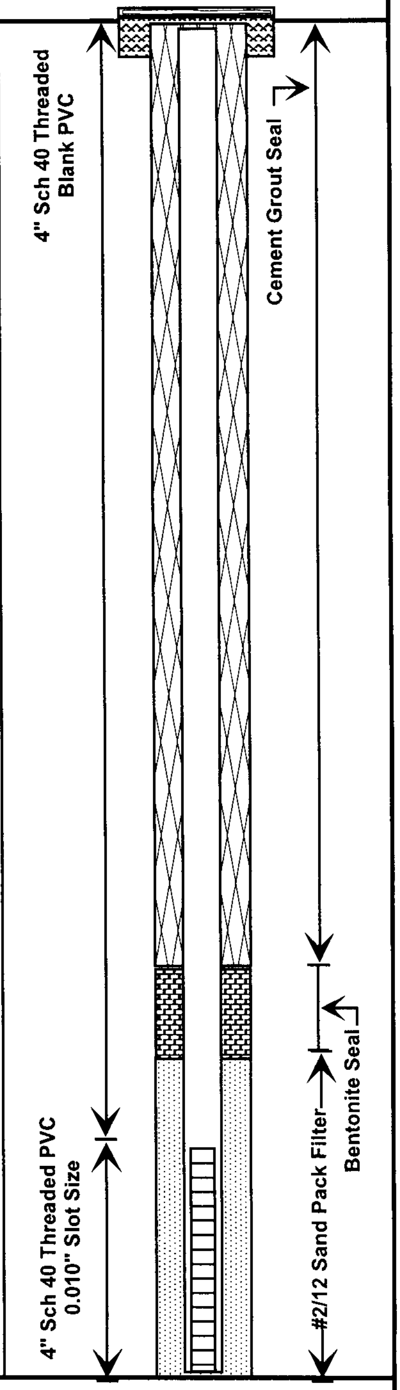
PROJECT: IDT San Jose **DRILLING METHOD:** Hollow Stem **GROUNDWATER DEPTH:** 31.04' **DRILLED BY:** Expl. Geo.

START DATE: 04-18-05 **SAMPLING METHOD:** SPT **GROUNDWATER ELEV:** 170.77' **LOGGED BY:** MJO

COMPLETION DATE: 04-18-05 **BORING DIA:** 12" **CASING DIA:** 4" **DATE OF GW MEAS:** 04-25-05 **CHECKED BY:** MJO

LITHOLOGIC DESCRIPTION	GRAPHIC LOG	SOIL TYPE	SAMPLE	DEPTH	BLOWS / FT	OVM (ppm)
3" asphalt & 8" baserock.	▩	a.c.		0		
SILTY CLAY: brown, dry, med. stiff.	▨	CL				
	▨			5	7	
	▨			10	7	
	▨			15	10	
	▨			20	5	
	▨			25	13	
Groundwater Encountered at 30 feet.	▨			30		

MONITORING WELL CONSTRUCTION


4" Sch 40 Threaded Blank PVC
Cement Grout Seal
Bentonite Seal
#2/12 Sand Pack Filter
4" Sch 40 Threaded PVC 0.010" Slot Size

Project # OL058-1.1

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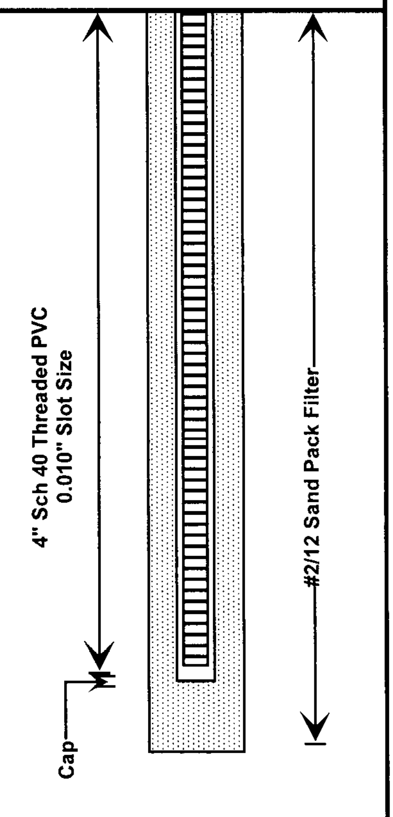
MONITORING WELL LOG

WELL NO. MW1

PROJECT: IDT San Jose **DRILLING METHOD:** Hollow Stem **GROUNDWATER DEPTH:** 31.04' **DRILLED BY:** Expl. Geo.
START DATE: 04-18-05 **SAMPLING METHOD:** SPT **GROUNDWATER ELEV:** 170.77' **LOGGED BY:** MJO
COMPLETION DATE: 04-18-05 **BORING DIA:** 12" **CASING DIA:** 4" **DATE OF GW MEAS:** 04-25-05 **CHECKED BY:** MJO

LITHOLOGIC DESCRIPTION	GRAPHIC LOG	SOIL TYPE	SAMPLE	DEPTH	BLOWS / FT	OVM (ppm)
Groundwater Encountered at 30 feet.				30	5	
SILTY CLAY: brown, dry, med. stiff.	▨	CL				
SANDY GRAVEL: brown, wet, med. dense; with med. to coarse sand. Pea to 1", well graded, sub-andgular.	▩	GW		35 40	17	
SAND: dark brownish gray, wet, dense; med. sand.	░	SP			32	
CLAY: brown w/ gray mottling, moist, v.stiff; with silt.	▨	CH		45	30	
Bottom of Hole @ 46.5'				50 55 60		

MONITORING WELL CONSTRUCTION



Project # OL058-1.1

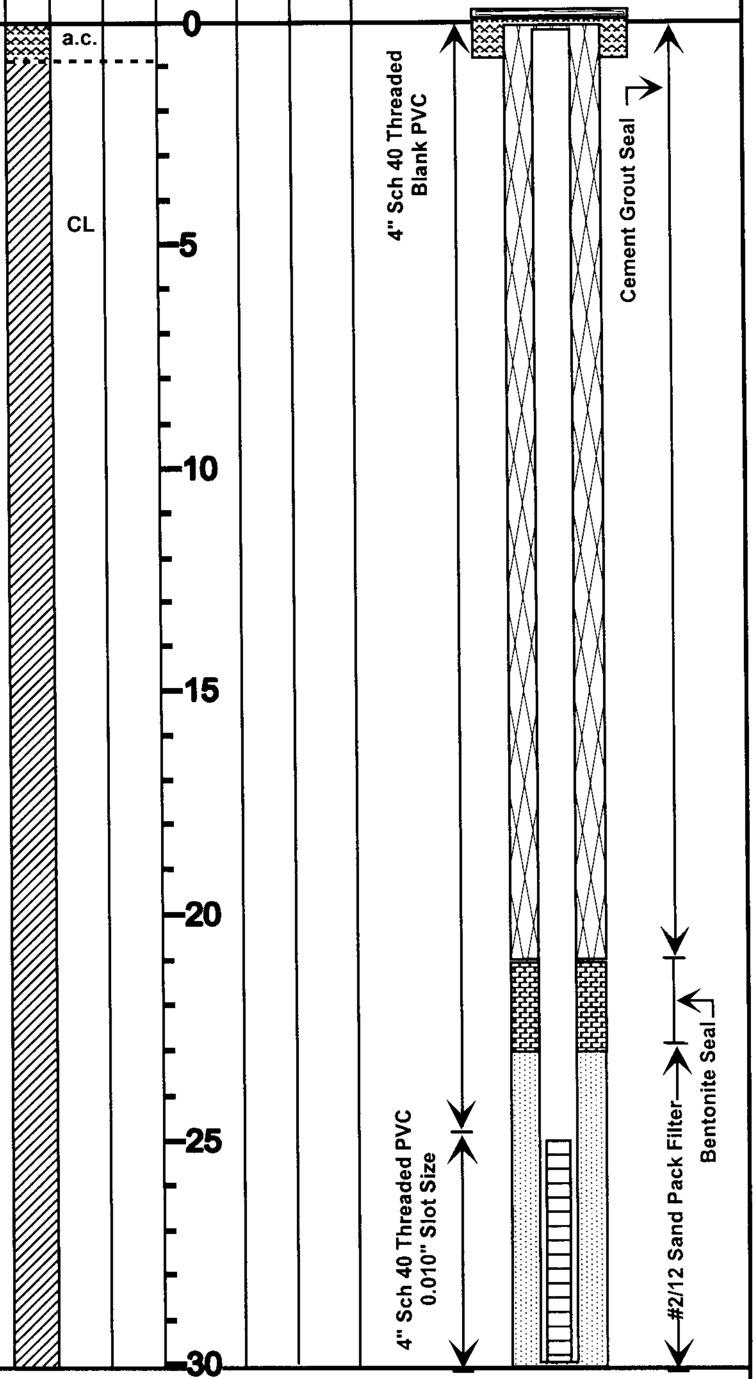
MJO Earthscience Services

MONITORING WELL LOG

WELL NO. MW2

PROJECT: IDT San Jose	**DRILLING METHOD:** Hollow Stem	**GROUNDWATER DEPTH:** 28.05' **DRILLED BY:** Expl. Geo.
START DATE: 04-18-05	**SAMPLING METHOD:** Cuttings	**GROUNDWATER ELEV:** 172.93' **LOGGED BY:** MJO
COMPLETION DATE: 04-18-05	**BORING DIA:** 12" **CASING DIA:** 4"	**DATE OF GW MEAS:** 04-25-05 **CHECKED BY:** MJO

LITHOLOGIC DESCRIPTION	GRAPHIC LOG	SOIL TYPE	SAMPLE	DEPTH	BLOWS / FT	OVM (ppm)	MONITORING WELL CONSTRUCTION
3" asphalt & 8" baserock.		a.c.		0			
SILTY CLAY: brown, dry, med. stiff.		CL					



Project # OL058-1.1

MJO Earthscience Services

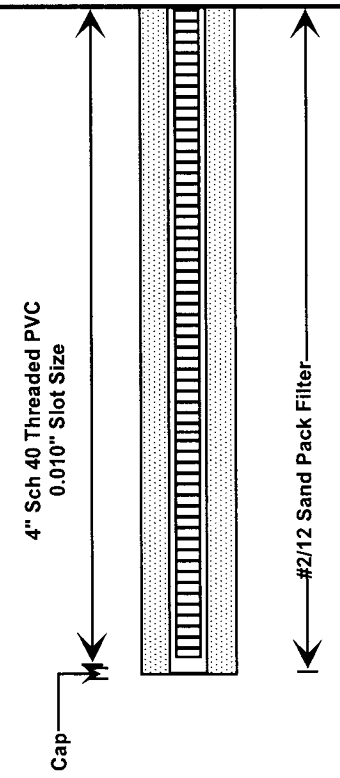
MONITORING WELL LOG

WELL NO. MW2

PROJECT: IDT San Jose	**DRILLING METHOD:** Hollow Stem	**GROUNDWATER DEPTH:** 28.05'	**DRILLED BY:** Expl. Geo.
START DATE: 04-18-05	**SAMPLING METHOD:** Cuttings	**GROUNDWATER ELEV:** 172.93'	**LOGGED BY:** MJO
COMPLETION DATE: 04-18-05	**BORING DIA:** 12" **CASING DIA:** 4"	**DATE OF GW MEAS:** 04-25-05	**CHECKED BY:** MJO

LITHOLOGIC DESCRIPTION	GRAPHIC LOG	SOIL TYPE	SAMPLE	DEPTH	BLOWS / FT	OVM (ppm)
Groundwater Encountered at 31 feet. SILTY CLAY: brown, dry, med. stiff.	▨	CL		30		
CLAYEY SAND: brown, wet, med. dense; with silt.	▒	SC		35 40		
CLAY: brown, moist, v.stiff; with silt.	▨	CH		45		
Bottom of Hole @ 45'				50 55 60		

MONITORING WELL CONSTRUCTION



Project # OL058-1.1

MJO Earthscience Services

Page 2 of 2

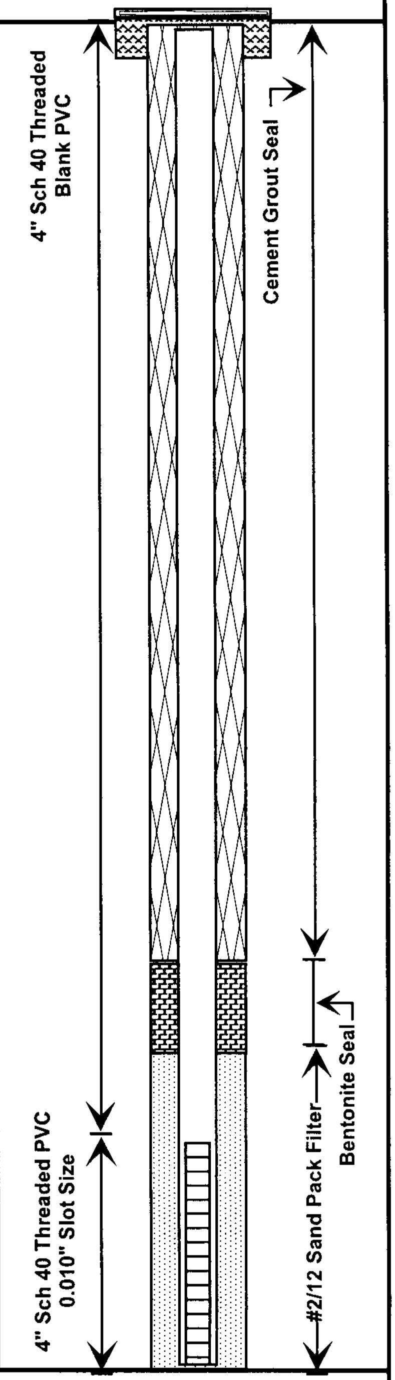
MONITORING WELL LOG

WELL NO. MW3

PROJECT: IDT San Jose	**DRILLING METHOD:** Hollow Stem	**GROUNDWATER DEPTH:** 30.41' **DRILLED BY:** Expl. Geo.
START DATE: 04-18-05	**SAMPLING METHOD:** Cuttings	**GROUNDWATER ELEV:** 172.19' **LOGGED BY:** MJO
COMPLETION DATE: 04-18-05	**BORING DIA:** 12" **CASING DIA:** 4"	**DATE OF GW MEAS:** 04-25-05 **CHECKED BY:** MJO

LITHOLOGIC DESCRIPTION	GRAPHIC LOG	SOIL TYPE	SAMPLE	DEPTH	BLOWS / FT	OVM (ppm)
4" asphalt & 8" baserock.		a.c.		0		
SILTY CLAY: brown, dry, med. stiff.		CL		5		
				10		
				15		
				20		
				25		
				30		

MONITORING WELL CONSTRUCTION


4" Sch 40 Threaded Blank PVC
Cement Grout Seal
Bentonite Seal
#2/12 Sand Pack Filter
4" Sch 40 Threaded PVC 0.010" Slot Size

Project # OL058-1.1

MJO Earthscience Services

MONITORING WELL LOG

WELL NO. MW3

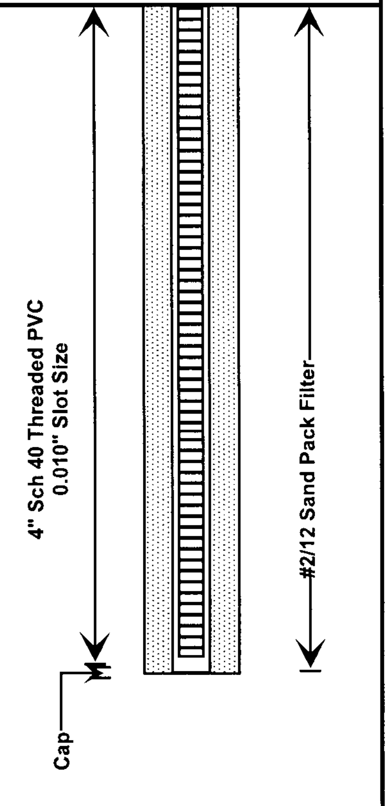
PROJECT: IDT San Jose **DRILLING METHOD:** Hollow Stem **GROUNDWATER DEPTH:** 30.41' **DRILLED BY:** Expl. Geo.

START DATE: 04-18-05 **SAMPLING METHOD:** Cuttings **GROUNDWATER ELEV:** 172.19' **LOGGED BY:** MJO

COMPLETION DATE: 04-18-05 **BORING DIA:** 12" **CASING DIA:** 4" **DATE OF GW MEAS:** 04-25-05 **CHECKED BY:** MJO

LITHOLOGIC DESCRIPTION	GRAPHIC LOG	SOIL TYPE	SAMPLE	DEPTH	BLOWS / FT	OVM (ppm)
Groundwater Encountered at 31 feet. CLAYEY SILT: brown, wet, soft; with 1/4" pea gravel and sand.		ML		30 35 40		
CLAY: brown, moist, v.stiff; with silt.		CH		45		
Bottom of Hole @ 45'				50 55 60		

MONITORING WELL CONSTRUCTION



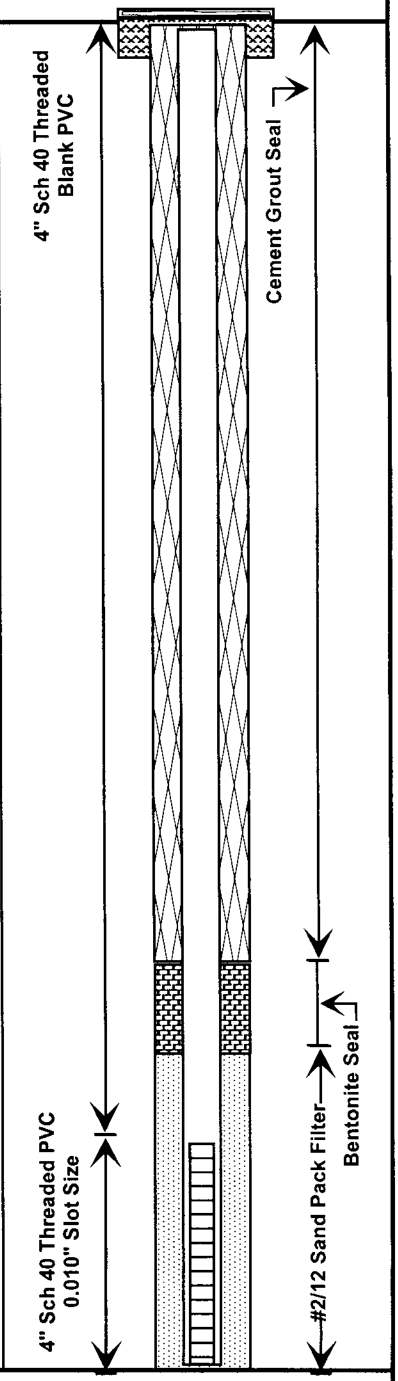
Project # OL058-1.1

MJO Earthscience Services

MONITORING WELL LOG

WELL NO. MW4

PROJECT: IDT San Jose	**DRILLING METHOD:** Hollow Stem	**GROUNDWATER DEPTH:** 33.21' **DRILLED BY:** Expl. Geo.
START DATE: 04-18-05	**SAMPLING METHOD:** Cuttings	**GROUNDWATER ELEV:** 171.29' **LOGGED BY:** MJO
COMPLETION DATE: 04-18-05	**BORING DIA:** 12" **CASING DIA:** 4"	**DATE OF GW MEAS:** 04-25-05 **CHECKED BY:** MJO

LITHOLOGIC DESCRIPTION	GRAPHIC LOG	SOIL TYPE	SAMPLE	DEPTH	BLOWS / FT	OVM (ppm)	MONITORING WELL CONSTRUCTION
4" asphalt & 8" baserock.		a.c.		0			 4" Sch 40 Threaded Blank PVC Cement Grout Seal Bentonite Seal #2/12 Sand Pack Filter 4" Sch 40 Threaded PVC 0.010" Slot Size
SILTY CLAY: brown, dry, med. stiff; with silt.		CL		5			
				10			
				15			
				20			
				25			
				30			

Project # OL058-1.1

MJO Earthscience Services

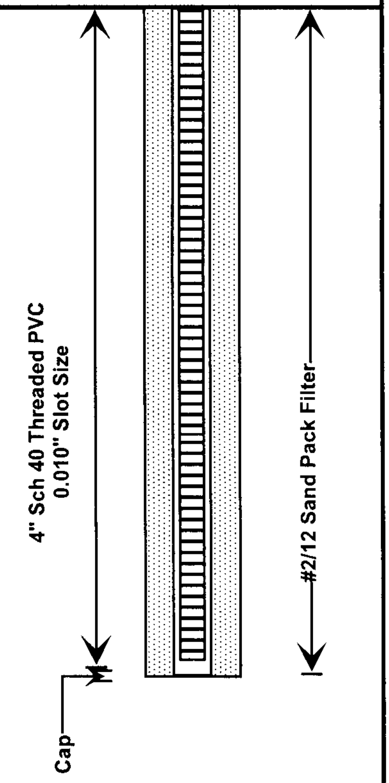
MONITORING WELL LOG

WELL NO. MW4

PROJECT: IDT San Jose	**DRILLING METHOD:** Hollow Stem	**GROUNDWATER DEPTH:** 33.21'	**DRILLED BY:** Expl. Geo.
START DATE: 04-18-05	**SAMPLING METHOD:** Cuttings	**GROUNDWATER ELEV:** 171.29'	**LOGGED BY:** MJO
COMPLETION DATE: 04-18-05	**BORING DIA:** 12" **CASING DIA:** 4"	**DATE OF GW MEAS:** 04-25-05	**CHECKED BY:** MJO

LITHOLOGIC DESCRIPTION	GRAPHIC LOG	SOIL TYPE	SAMPLE	DEPTH	BLOWS / FT	OVM (ppm)
CLAYEY SILT: brown, wet, soft; with 1/4" pea gravel and sand. **Groundwater Encountered at 33 feet.**		**ML**		30 35 40		
CLAY: brown, moist, v.stiff; with silt.		**CH**		45		
Bottom of Hole @ 45'				50 55 60		

MONITORING WELL CONSTRUCTION



Project # OL058-1.1

MJO Earthscience Services

MONITORING WELL LOG

BORING NOs. SB1 - 18

PROJECT: IDT San Jose **DRILLING METHOD:** Geoprobe **GROUNDWATER DEPTH:** n/a **DRILLED BY:** ECA
START DATE: 4/7/05 **SAMPLING METHOD:** Geoprobe **GROUNDWATER ELEV:** n/a **LOGGED BY:** MJO
COMPLETION DATE: 4/7/05 **BORING DIA:** 2" **CASING DIA:** n/a **DATE OF GW MEAS:** n/a **CHECKED BY:** MJO

LITHOLOGIC DESCRIPTION	GRAPHIC LOG	SOIL TYPE	SAMPLE	DEPTH	BLOWS / FT	OVM (ppm)	WELL DESIGN	REMARKS
Landscape Area								
SILTY CLAY: brown, dry, med. stiff.	▨	CL	■ ■	0				
Bottom of Hole @ 4'				5 10				

Project # OL058-1.1

MJO Earthscience Services

BORING LOG

BORING NOs. SB20 - 26

PROJECT: IDT San Jose
DRILLING METHOD: Geoprobe
GROUNDWATER DEPTH: n/a
DRILLED BY: ECA
START DATE: 4/7/05
SAMPLING METHOD: Geoprobe
GROUNDWATER ELEV: n/a
LOGGED BY: MJO
COMPLETION DATE: 4/7/05
BORING DIA: 1"
CASING DIA: n/a
DATE OF GW MEAS: n/a
CHECKED BY: MJO

LITHOLOGIC DESCRIPTION	GRAPHIC LOG	SOIL TYPE	SAMPLE	DEPTH	BLOWS / FT	OVM (ppm)	WELL DESIGN	REMARKS
Indoor Area								
8" concrete & 4" base	▦	Cnc.		0				
SILTY CLAY: brown, dry, med. stiff.	▨	CL	■ ■					
Bottom of Hole @ 4.5'				5				
				10				

Project # OL058-1.1

MJO Earthscience Services

BORING LOG

APPENDIX III-B

LANDSCAPE ADDITIVES

Spring / Summer Feb. March - April - May
June - July - August - Sept

Andersons
GOLF PRODUCTS

Turf Fertilizer 30-3-9 with Poly-S® Nitrogen & 2% Iron

GUARANTEED ANALYSIS

Total Nitrogen (N)	30.00%
1.17% Ammonical Nitrogen	
28.83% Urea Nitrogen*	
Available Phosphate (P_2O_5)	3.00%
Soluble Potash (K_2O)	9.00%
Sulfur (S)	5.53%
5.53% Free Sulfur (S)	
Total Iron (Fe)	2.00%

Plant nutrients derived from diammonium phosphate, urea, ferrous oxide, polymer coated sulfur coated urea, and potassium chloride.

Chlorine (Cl) Max. 7.62%

*15.0% slowly available nitrogen from polymer coated sulfur coated urea. **F292**

Information regarding the contents and levels of metals in this product is available on the internet at http://www.regulatory-info-ap.com.

DIRECTIONS FOR USE

Apply only as directed. Use Turf Fertilizer 30-3-9 on actively growing fairways and roughs whenever a high nitrogen feeding with quick initial green-up, controlled-release nitrogen and/or iron are desired.

Rates

LOW:	0.75 lb. N/1,000 sq. ft.
MEDIUM:	0.90 lb. N/1,000 sq. ft.
HIGH:	1.25 lb. N/1,000 sq. ft.

For all applications

- For use on fairways and roughs.
- DO NOT USE ON GREENS.
- Do not apply with a drop-type spreader.
- Apply to dry foliage.
- Water in after application with a minimum of 0.2 inches to help move particles in the turf canopy and to avoid possible staining.
- Do not collect clippings for at least one mowing following application to prevent particle pick-up.

Cool Season Grasses

- Apply at LOW or MEDIUM RATE.
- Apply at HIGH RATE in spring or fall when deeper greening is desired or to correct or prevent iron deficiencies.
- Exception: Apply at LOW RATE in mid-summer when temperatures are above 80°F.

Warm Season Grasses

- Apply at LOW or MEDIUM RATE.
- HIGH RATE may be used to help bring grasses out of dormancy in early spring (such as bermudagrass) or to correct or prevent iron deficiencies.
- Exception: Apply at LOW RATE during mid-summer when temperatures are extreme (90°F or above).

Notice: This product contains the micronutrient iron for extra greening and to help prevent iron deficiency. Iron may stain concrete and other surfaces. Misapplied product to these surfaces should be removed promptly by sweeping or blowing. DO NOT WASH OFF WITH WATER.

STORAGE AND DISPOSAL

Store in a clean, dry place. Reseal opened bag by folding top down and securing. Use only clean, dry spreaders. Do not leave unused product in spreaders.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use and the Warranty Disclaimer and Limitation of Liability before using this product. If terms are not acceptable, return the unopened product container at once. By using this product, user or Buyer accepts the following Warranty Disclaimer and Limitation of Liability:

WARRANTY DISCLAIMER and LIMITATION of LIABILITY

Manufacturer warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions. Manufacturer makes NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Where permissible, it is Manufacturer's intent to LIMIT ANY LIABILITY FOR SPECIAL, CONSEQUENTIAL OR INCIDENTAL ECONOMIC DAMAGES to refund of purchase price or replacement of product, at Buyer's choice. Manufacturer DISCLAIMS ANY LIABILITY FOR COMPENSATORY OR OTHER DAMAGES ARISING OUT OF ANY USE CONTRARY TO LABEL DIRECTIONS. Use contrary to label directions is not permitted.

LEGAL RIGHTS

THIS LIMITED WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS; YOU MAY HAVE OTHER

Suggested Spreader Settings

To provide proper distribution, calibrate your spreader before application

50 lbs feeds 20,000 sq. ft. (0.46/acre) with 0.75 lb N/1,000 sq. ft. at the 2.50 lb. rate
50 lbs feeds 16,600 sq. ft. (0.38/acre) with 0.90 lbs N/1,000 sq. ft. at the 3.01 lb. rate
50 lbs feeds 11,900 sq. ft. (0.27/acre) with 1.25 lbs N/1,000 sq. ft. at the 4.17 lb. rate

			SPREADER SETTINGS		
			LBS PER 1,000 SQUARE FEET		
SPREADER	GROUND SPEED	WIDTH OF COVERAGE	2.50	3.01	4.17
The Andersons Rotaries AccuPro/SR-2000 (Cone 4)	3 mph	13 feet	L	M 1/2	N
Scotts Rotaries R-8, R-8A (Cone 4)	3 mph	13 feet	K 1/2	M	N
Lely Models WTR, WFR, HR, 1250 (PTO at 450 rpm)	4.5 mph	40 feet	5 1/4 I	5 3/4 I	7 I
LESCO		10 feet	E	E 1/2	F 1/2
Vicon (03 Series-Standard Spout)	4.5 mph	36 feet	24	27	32

AGC83730

Product of USA
Manufactured by:
The Andersons Lawn Fertilizer Division, Inc.
P. O. Box 119, Maumee, OH 43537
1-800-225-2639
Visit us on the web at: **www.AndersonsGolfProducts.com**

BEST®

Nitra King® 19-4-4 with 2.2% Iron

DESCRIPTION: A COOL SEASON FERTILIZER WITH 4.0% NITRATE NITROGEN

BENEFITS: BEST® NITRA KING® 19-4-4 with 2.2% Iron

- Is a professional fertilizer containing the proper ratio of nitrogen, phosphate, potash, iron, calcium, and sulfur.
- Contains only enough nitrate nitrogen (4.0%) for quick green-up of turf. Minimizes nitrogen loss from nitrate leaching.
- The high iron (2.2%) formula provides deep green color.
- The iron in NITRA KING® is part of a homogeneous pellet which virtually eliminates the possibility of staining valuable concrete walks, driveways, cart paths, mow strips, etc.

HOMOGENEOUS BEST PELLETS

APPLICATION RATES:

FAll FERTilizer
OCT - NOV-

	Pounds of Actual Nitrogen desired per 1,000 sq.ft.	Pounds of NITRA KING® to apply per 1,000 sq.ft.	Pounds of NITRA KING® to apply per Acre
Turfgrass:	.50	2.6	115
	.75	3.9	175
**Recommended Rate*	1.00*	5.2*	230*
	1.25	6.6	285

PREPLANT: Broadcast 7½ lbs. per 1,000 sq. ft. (325 lbs.per acre).
GROUNDCOVER: Broadcast at 5 lbs. per 1,000 sq.ft. (½ lb. per 100 sq.ft.)
FLOWERING SHRUBS & EVERGREENS: Sprinkle ¼ cup of NITRA KING® evenly around dripline of plant and work into top 1inch of soil.
TREES: Apply ½ lb. per 1 inch of trunk diameter. Distribute evenly under branches out to dripline.

NOTE: Liquid measuring cups are very close in estimating the weight of dry granular fertilizers.
Example: An 8 oz. (1 cup) measuring cup holds approximately 8 oz. of dry granular fertilizer.

PRODUCT COVERAGE:

Based on the Recommended Rate.

ONE 50-LB. BAG COVERS 10,400 SQ.FT.
4 50-LB. BAGS COVER ONE ACRE.

Tech sheets, MSDS and other information on BEST products available at www.bestfertilizer.com

SPREADER SETTINGS:

Listed Settings Will Approximately Apply the Recommended Rate.

BEST® Pro	5½B
Spyker / BEST® Models 34, 44, 64	4.9
Earthway	16
Lesco	17
Scotts R-8A (Cone 6)	P½
Lely / Vicon	visit www.bestfertilizer.com

SGN 250

NOTE: Spreader settings are guidelines only. Spreaders should be checked for accuracy.

APPLICATION PRECAUTIONS:

- Apply to dry turf or foliage and irrigate thoroughly immediately after application.
- Iron and other plant nutrients can cause staining of sidewalks. Sweep walkways prior to irrigation. Walkways should be dry at time of application.
- Keep away from pools, ponds, etc. Do not contaminate potable water.

GUARANTEED ANALYSIS:

TOTAL NITROGEN (N)	19.0%
15.0% Ammoniacal Nitrogen	
4.0% Nitrate Nitrogen	
AVAILABLE PHOSPHATE (P_2O_5)	4.0%
SOLUBLE POTASH (K_2O)	4.0%
Calcium (Ca)	2.4%
Sulfur (S)	11.5%
Iron (Fe)	2.2%

Derived from Monoammonium Phosphate, Ammonium Sulfate, Calcium Ammonium Nitrate, Dolomite, Sulfate of Potash, Iron Oxysulfate.

PACKAGE SIZE:

50-LB. (22.68-Kg.) BAGS

74081_nitraking1944_R3-11-09

HANDLING PRECAUTIONS:
MSDS: See Reverse

CAUTION: KEEP OUT OF REACH OF CHILDREN
HARMFUL IF SWALLOWED — DO NOT INHALE

bestfertilizer.com

Spread The Word

Simplot

Simplot Professional Products • P.O. Box 198, Lathrop, CA 95330 • 800-992-6066

BEST®

Ammonium Sulfate 21-0-0

2 grades available: Soluble Fines and Standard Grade

DESCRIPTION: AN ECONOMICAL SOLUBLE FORM OF QUICK GREENING NITROGEN WITH HIGH SULFUR

BENEFITS: BEST® AMMONIUM SULFATE 21-0-0

Winter
Dec. JAN

- Is a quick acting form of water soluble nitrogen that stimulates vegetative growth and produces deep green color.
- Contains high sulfur (24%) to enhance decomposition of thatch through stimulation of soil micro-organisms, improves color and density of turf. Provides for greater drought tolerance and improved winter hardiness.
- Is a very economical form of nitrogen and sulfur.
- Is a very high quality, screened crystaline material that is not produced as a result of any bi-product manufacturing process.

APPLICATION RATES:

	Pounds of Actual Nitrogen desired per 1,000 sq.ft.	Pounds of 21-0-0 to apply per 1,000 sq.ft.	Pounds of 21-0-0 to apply per Acre	Lbs. of Actual Sulfur Applied per 1,000 sq.ft.
Turfgrass:	.50	2.3	100	.55
	.75	3.5	155	.84
**Recommended Rate*	1.00*	4.7*	205*	1.13*

GROUNDCOVER: Broadcast at 5 lbs. per 1,000 sq.ft. (½ lbs. per 100 sq. ft.)
SHRUBS & EVERGREENS: Sprinkle ¼ cup evenly around dripline of plant and work into top 1 inch of soil.
TREES: Apply ½ lb. per 1 inch of trunk diameter. Distribute evenly under branches out to dripline.
NOTE: Liquid measuring cups are very close in estimating the weight of dry granular fertilizers.
Example: an 8 oz. (1 cup) measuring cup holds approximately 8 oz. of dry granular fertilizer.

PRODUCT COVERAGE:

Based on the Recommended Turfgrass Rate

ONE 50-LB. BAG COVERS 10,600 SQ.FT.
4½- 50-LB. BAGS COVER 1 ACRE

Tech sheets, MSDS and other information on BEST products available at www.bestfertilizer.com

SPREADER SETTINGS:

Listed Settings Will Approximately Apply the Recommended Rate.

BEST® Pro	5B
Spyker / BEST® Models 34, 44, 64	4.8
Earthway	14
Lesco	H
Scotts R-8A (Cone 6)	K
Lely 1250 / Vicon	visit www.bestfertilizer.com

SGN 200

NOTE: Spreader settings are guidelines only. Spreaders should be checked for accuracy.

APPLICATION PRECAUTIONS:

- Apply to dry turf or foliage and irrigate thoroughly immediately after application.
- Keep away from pools, ponds, etc. Do not contaminate potable water.

GUARANTEED ANALYSIS:

TOTAL NITROGEN (N)	21.00%
21.0% Ammoniacal Nitrogen	
Sulfur (S)	24.00%

Derived from Ammonium Sulfate.

Information regarding the contents and levels of metals in this product is available on the Internet at http://www.regulatory-info-jr.com

PACKAGE SIZE: **50-LB. (22.68-Kg.) BAGS**

74042BAG (PRO/TB R7-3-07)

HANDLING PRECAUTIONS:
MSDS: See Reverse

CAUTION: KEEP OUT OF REACH OF CHILDREN
HARMFUL IF SWALLOWED — DO NOT INHALE

KEEP OUT OF REACH OF CHILDREN
CAUTION
Read entire label for additional precautionary statements.
FOR PROFESSIONAL OR INDUSTRIAL USE ONLY

GENERAL INFORMATION

Aquatrols® Sixteen 90 is an economical surfactant and a proven alternative for those interested in a longer-lasting surfactant. Aquatrols Sixteen 90 is proven to remain effective in the soil for up to three months reducing water repellency (the cause of localized dry spots). Unlike some "longer-term" surfactants, Aquatrols Sixteen 90 is effective regardless of turf type, environmental or climatic stress conditions.

Aquatrols Sixteen 90 is easily applied with conventional spray equipment. **It is best to make initial** application early in the season before stress begins.

DIRECTIONS FOR USE

GENERAL TURF

Full Rate Application

Apply Aquatrols Sixteen 90 at 16 fl oz/1000 sq ft (480 ml/100 m^2) in 5 gallons (20 L) of water. Apply a post-treatment syringe cycle to activate. For control beyond 3 months, a subsequent application of 8 fl oz/1000 sq ft (240 ml/100 m^2) in 2 gallons (8L) of water may be required for extended performance through the fall period.

Split Application

Apply Aquatrols Sixteen 90 at 8 fl oz/1000 sq ft (240 ml/100 m^2) in 2 gallons (8L) of water, followed 7-10 days later with a second application at 8 fl oz/1000 sq ft (240 ml/100 m^2). Apply a post-treatment syringe cycle to activate. For control beyond 3 months, a subsequent application of 8 fl oz/1000 sq ft (240 ml/100 m^2) in 2 gallons (8L) of water may be required for extended performance through the fall period.

DO NOT combine Aquatrols Sixteen 90 in the spray tank with pesticides or fertilizers unless prior use has shown the combination physically compatible, effective, non-injurious under local conditions.

For more detailed use information, call 1-800-257-7797.

STORAGE AND DISPOSAL

- Keep container tightly closed. Store in original container only. Keep in a secure and locked storage area. Do not add water to the contents of this container.

- Triple rinse container, empty rinse water into spray or stock tank. Dispose of empty containers in accordance with federal, state, and local law.

PRECAUTIONARY STATEMENTS

- CAUTION: MAY CAUSE EYE IRRITATION. DO NOT GET IN EYES.
- AVOID BREATHING VAPORS OR MISTS.
- AVOID USING PRODUCT IN A MANNER AS TO DIRECTLY, OR THROUGH DRIFT, EXPOSE WORKERS OR OTHER PERSONS.
- ALWAYS CONSULT THE MATERIAL SAFETY DATA SHEET FOR SPECIFIC INSTRUCTIONS.
- APPLICATORS AND OTHER HANDLERS MUST WEAR GOGGLES OR A FACIAL SPLASH SHIELD; CHEMICAL RESISTANT GLOVES, SUCH AS NITRILE RUBBER ≥ 14 MILS OR NEOPRENE RUBBER ≥ 14 MILS; COVERALLS OR LONG SLEEVED SHIRT AND LONG PANTS; SHOES PLUS SOCKS.
- KEEP OUT OF REACH OF CHILDREN.

AQUATROLS

Sixteen 90

Guaranteed Analysis:
Active Ingredient - 99.5%.......Propoxylated Polyethylene Glycols
Inert Ingredient - 0.5%........Water

1 1 0

NOT A PLANT FOOD INGREDIENT

NOT RECOMMENDED FOR USE AS A FERTILIZER SUBSTITUTE

NJTSRN26934800000-5064
All ingredients are exempt from the requirements of a tolerance as specified in 40 CFR 180.1001

CONTENTS

US Volume	US Weight	Metric Volume	Metric Weight
☐ 5 gal	43 lbs	☐ 20 L	20.68 kg
☐ 30 gal	258 lbs	☐ 115 L	118.91 kg
☐ 55 gal	47[illegible] lbs	☐ 210 L	217.14 kg

Lot No:

AQUATROLS
1273 Imperial Way • Paulsboro, NJ 08066 • 1-800-257-7797 • www.aquatrols.com

Specimen Label

FIRST AID MEASURES IN CASE OF CONTACT

- EYE CONTACT: DO NOT RUB EYES. Immediately flush eyes with large amounts of water for minutes lifting the lower and upper lids. Seek medical attention if necessary.
- SKIN CONTACT: Remove contaminated clothing and immediately wash affected area with lar amounts of water for at least 5 minutes. If irritation or redness persists, seek medical attention needed.
- IF SWALLOWED: If victim is conscious and able to swallow, quickly give milk or water to dilute. not give sodium bicarbonate, vinegar, or fruit juices. Seek medical attention if necessary. Indu vomiting only upon advice from a physician.
- INHALATION: Move individual to fresh air and check to assure adequate respiration. Seek medi attention if necessary.

IN CASE OF EMERGENCY OR SPILL
Contact CHEMTREC at 1-800-424-9300
International 1-703-527-3887 (call collect)

Applicators and other handlers should wash hands before eating, drinking, chewing gum, using tobac or using the toilet. Remove protective clothing and equipment after handling. Wash the outside gloves before removing. Wash thoroughly and change into clean clothing.

For technical information and Material Safety Data Sheet (MSDS), contact Aquatrols at 1-800-257-7797 or visit our website www.aquatrols.com

CONDITIONS OF SALE
LIMITATION OF LIABILITY AND REMEDIES
AQUATROLS CORPORATION OF AMERICA, INC.

Injury to the crop to which the product is applied may result from the occurrence of extraordinary unusual weather conditions, the failure to follow the label directions or good application practices, all which are beyond the control of the seller. In addition, failure to follow label directions may cause injury other crops, animals, man, or the environment.

This product is to be used and applied according to the label directions by professionals trained in the u of agricultural chemicals.

This material is not intended for use by, nor should be used by, consumers. The seller warrants that th product conforms to the chemical description on the label.

The seller makes no other warranties or representations of any kind, expressed or implied, concerni the product, including no implied warranty of merchantability or fitness for any particular purpose, and such warranty shall be implied by law.

The exclusive remedy against the seller for any cause of action relating to the handling or use of th product is claim for damage, and in no event shall damages or any other recovery of any kind against th seller exceed the price of the product which causes the alleged loss, damage, injury or other claim. Th seller shall not be liable and any and all claims against the seller are waived, for special, indirec incidental or consequential damages or expenses, of any nature including but not limited to, loss profits or income, or any liability incurred by the buyer to any third party in any way arising out of relating to the handling, repackaging from original container or the relabeling by the buyer or user, or us of this product, whether or not based on the seller's negligence, breach of warranty, strict liability in tort any other cause of action.

The seller offers this product and the buyer and user accept it, subject to the foregoing conditions of sa and limitation of warranty, liability and remedies.

Information regarding the contents and levels of metals in this product is available on the internet http://www.aapfco.org/metals.htm.

AQUATROLS PERFORMANCE GUARANTEE

Aquatrols guarantees you will be satisfied with the performance of this product when used as directed, your money back. Simply send proof of purchase and a brief reason for dissatisfaction to Aquatrol 1273 Imperial Way, Paulsboro, NJ 08066, USA.

07/0

Nemasys® G for Grub Control

Nemasys® G Benefits include:

- Proven curative control
- No restrictions in use and no re-entry interval
- Natural product safe to applicators, users and the environment.
- No requirements for protective clothing
- No concerns for residue run off

How Nemasys G works

Nemasys G contains live nematodes in their vigorously infective stage. These nematodes attack pest larvae by entering their natural body openings. Once inside, they release symbiotic bacteria that quickly kill the insect. Reproduction inside the insect releases a new generation of hungry infective juveniles which disperse in search of further prey.

Active Ingredients: *Heterorhabditis bacteriophora* & water 90%
Other ingredients: inert carrier..10%
Guaranteed Analysis: Each tray contains a minimum of 250 million Nematodes.

		RECOMMENDED RATES
European Chafer Grub	*Rhizotrogus majalis*	3 billion per acre or (12 trays per acre) (1 tray treats 3600 sq. ft.)
Oriental Beetle Grub	*Exomala orientalis*	1 to 2 billion per acre or (4 to 8 trays per acre) (1 tray treats 5400 sq. ft. to 10,800 sq ft)
Japanese Beetle Grub	*Popillia japonica*	

DIRECTIONS FOR USE

- Use 65 to 130 gallons of water per acre spray solution. (1.5 to 3 gallons per 1000 sq. ft.)
- Remove all filters from the application equipment.
- Ensure ground to be treated is moist. Ideally, irrigate prior to application.
- Irrigate the treated area directly after application, before the area dries, with 1/8 of an inch of water.

BOOM SPRAYER APPLICATION:

- Partly fill tank with cool clean water. Start the agitator and keep running until application is completed.
- In a large bucket of 2.5 gallons water, empty the appropriate number of trays, and mix thoroughly.
- Rinse bucket contents into the tank through its sieve.
- Add required volume of additional water to the tank.
- Apply spray suspension to target site.

ISO 9001 REGISTERED

BECKER UNDERWOOD®
Becker Underwood • 801 Dayton Avenue • P.O. Box 667 • Ames, IA 50010 USA
800-232-5907 • 515-232-5907 • fax 515-232-5961 • www.beckerunderwood.com

BACKPACK SPRAYER APPLICATION:

- Make up stock solution by mixing 1 tray in 3 gallons of water. Agitate the stock solution and dilute as follows:
  -Add 1 gallon of stock solution to 2 gallons in the backpack.
  (3 gallons treats 1200 sq. ft., for 3 bil./ac. rate)
  -Add 3 quarts of stock solution to 2.25 gallons in the backpack.
  (3 gallons treats 1350 sq. ft., for 2 bil./ac. rate)
- Repeat with rest of the stock solution.

FOR OPTIMUM RESULTS:

- Use when most grubs are in the 1st and 2nd instar.

TO AVOID DESICCATION OF THE NEMATODES:

- Avoid direct sunlight and make application during early morning or late afternoon/evening.
- Application during rain is highly desirable.
- Ensure soil is moist prior to application and for at least two weeks after.
- It is very important to irrigate immediately after application to move the nematodes below the thatch layer.
- Soil should be between 54° and 86° F at application.
- Use entire tray at one time (do not sub-divide contents of tray).
- Use nematodes immediately after mixing.
- Agitate nematodes constantly during application.

PRECAUTIONS

- Do not use if past expiry date or incorrectly stored.
- Do not tank mix.
- This product will not control the adult stages of the chafer and beetle grubs.
- Do not attempt to hold or store mix solution overnight.
- Do not exceed 150 psi pump pressure.

STORAGE AND DISPOSAL

- Upon receipt remove outer packaging.
- Store in a refrigerator (41°F) but **do not freeze.**
- Ensure good air circulation around each tray.
- Use before expiry date.
- Disposal: product and packaging waste resulting from the use of this product, or unused, out of date product, may be disposed of on site or at any approved waste disposal facility in accordance with local regulations

CONDITIONS OF SALE AND WARRANTY

Becker Underwood warrants that this product conforms to the description on the label. Use and storage of this product is beyond the control of Becker Underwood or the distributor. BECKER UDNERWOOD OR THE DISTRIBUTOR MAKES NO OTHER EXPRESSED OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESSED OR IMPLIED WARRANTY. BUYER'S SOLE REMEDY SHALL BE LIMITED TO, AT BECKER UNDERWOOD'S OPTION, EITHER REPLACEMENT OF DEFECTIVE PRODUCT OR FULL REFUND. In no case shall Becker Underwood or the distributor be liable for consequential, special, or indirect damages resulting from the use or handling of this product. In using this product the Buyer accepts these terms and conditions.

Nemasys® is a registered trademark of Becker Underwood

SIXTEEN/90

Material Safety Data Sheet **Date Prepared: March 1, 2005** **Supersedes Date: July 12, 2004**

1. CHEMICAL PRODUCT AND COMPANY DESCRIPTION

AQUATROLS CORP
1273 IMPERIAL WAY
PAULSBORO, NJ 08066
USA

Emergency Phone Numbers: For emergencies involving a spill, leak, fire, exposure or accident, contact CHEMTREC 1-800-424-9300

For Product Information: 1-800-257-7797 or www.aquatrols.com

Chemical Name or Synonym: Non-ionic surfactant, wetting agent.

C.A.S. Number: Proprietary

2. COMPOSITION/INFORMATION ON INGREDIENTS

			Exposure Limits	
Component	**CAS Reg. Number**	**Weight (%)**	**OSHA/PEL**	**ACGIH/TLV**
Non-ionic surfactant	Proprietary*	> 99.5	Not established	Not established
Water	7732-18-5	< 0.5	N/A	N/A
Dioxane	123-91-1	< 0.001		90 mg/m^3
Ethylene Oxide	75-21-8	< 0.001		1.8 mg/ m^3
Propylene Oxide	75-56-9	< 0.001		48 mg/ m^3

* Trade secret as allowed by 29 CFR 1901.1200-48

3. HAZARDS IDENTIFICATION

A. Emergency Overview:

Physical Appearance and Odor: Clear to hazy viscous liquid, slight odor.

Warning Statements: CAUTION: May cause irritation.

B. Potential Health Effects:

Primary Route of Entry: Routes of entry for liquids include eye and skin contact, inhalation and ingestion.

Effects of Overexposure:

Acute Eye:	Slightly irritating. May cause excessive watering, redness, and/or irritation.
Acute Skin:	Low acute dermal toxicity. Slightly irritating. May cause redness.
Acute Inhalation:	Inhalation is not likely. Mists may cause upper respiratory tract irritation.
Acute Ingestion:	Overexposure may cause gastrointestinal irritation, diarrhea, nausea, and vomiting.
Chronic Effects:	This product does not contain any ingredient designated by IARC, NTP, ACGIH or OSHA as probable or suspected human carcinogens.

4. FIRST AID MEASURES

EYE CONTACT: DO NOT RUB EYES. Immediately flush eyes with large amounts of water for 15 minutes lifting the lower and upper lids. Seek medical attention if necessary.

SKIN CONTACT: Remove contaminated clothing and immediately wash affected area with large amounts of water for at least 5 minutes. If irritation or redness persists, seek medical attention as needed.

IF SWALLOWED: If victim is conscious and able to swallow, quickly give milk or water to dilute. Do not give sodium bicarbonate, vinegar, or fruit juices. Seek medical attention if necessary. Induce vomiting only upon advice from a physician.

INHALATION: Move individual to fresh air and check to assure adequate respiration. Seek medical attention if necessary.

Medical Conditions Possibly Aggravated by Exposure: Skin contact may aggravate existing skin conditions.

Notes to Physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. No specific antidote is available.

5. FIRE FIGHTING MEASURES

FIRE HAZARD DATA:

Flash Point: > 93°C (200°F). Flammability class: WILL BURN. **Method Used:** Pensky-Martens Closed Cup

Flammability Limits (vol/vol%): Lower: Not established **Upper:** Not established

Extinguishing Media:
- Recommended:
  - Small fires – dry chemical, carbon dioxide
  - Large fires – alcohol foam, universal foam, water spray
- Not Recommended:
  - Water jet (frothing possible)

Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.

Unusual Fire and Explosion Hazards: Product will burn under fire conditions.

Hazardous Decomposition Materials (Under Fire Conditions): Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Containment of Spill: Follow procedure described below.

Cleanup and Disposal of Spill: Absorb with an inert absorbent. Sweep up and place in an appropriate closed container. Clean up residual material by washing area with water. Collect washings for disposal.

Environmental and Regulatory Reporting: Do not flush to drain. Spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperature: 15 to 49°C (59 to 120°F)

Handling: Avoid breathing vapors and mists. Avoid direct or prolonged contact with skin and eyes. Ethylene oxide may collect in container head space. Although concentrations are expected to remain below established exposure limits, provide adequate ventilation when accessing or working with open containers and tanks.

Storage: Store in tightly closed containers. Store in an area that is dry, well-ventilated, away from ignition sources, and away from incompatible materials (see Section 10. Stability and Reactivity).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Introductory Remarks:	These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. While developing safe handling procedures, do not overlook the need to clean equipment and piping systems for maintenance and repairs. Waste resulting from these procedures should be handled in accordance with Section 13: Disposal Considerations. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers
Exposure Guidelines:	No exposure limits were found for this product or any of its' ingredients.
Engineering Controls:	When potential for exposure exists, provide adequate general area dilution/exhaust ventilation.
Respiratory Protection:	When respirators are required, use a suitable NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations. Under normal conditions with adequate ventilation, no protection is necessary.
Eye/Face Protection:	Appropriate ANSI Z87 approved equipment should be selected for the particular use intended for this material. An available eyewash station is recommended.
Skin Protection:	Skin contact should be minimized through use of appropriate long-sleeved clothing (i.e., shirts and pants). Consideration must be given both to durability as well as permeation resistance. USDA accepted Nitrile (CFR-20) or neoprene rubber (CFR-21) gloves are recommended
Work Practice Controls	Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material.

1. Do not store, use, and/or consume food, beverages, tobacco products, or cosmetics in area where this material is stored.
2. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
3. Wash exposed skin promptly to remove accidental splashes of contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for exact specifications.

Physical Appearance:	Clear to hazy viscous liquid
Odor:	Slight odor
pH:	5.0 - 7.5 (2.5% solution)
Specific Gravity:	1.02 – 1.04 g/ml @ 25°C
Water Solubility:	Soluble
Melting Point Range:	-4°C at 760 mmHg
Freezing Point Range:	< 0°C (32°F)
Boiling Point Range:	>150°C at 760 mmHg
Vapor Pressure:	< 0.01 mmHg @ 25°C (77°F)
Vapor Density:	>Air (Air = 1 kg/m^3)
Percent Volatiles:	**Volume %:** < 0.5

10. STABILITY AND REACTIVITY

Chemical Stability:	This material is stable under normal handling and storage conditions described in Section 7.
Conditions to be Avoided:	Heat, open flame and spark
Materials/Chemical to be Avoided:	Strong bases, strong oxidizers, strong reducing agents

The following Hazardous Decomposition Products might be Expected:

Decomposition Type: Thermal	Oxides of carbon
Hazardous Polymerization:	Will not occur:
Avoid the Following to Inhibit Hazardous Polymerization:	N/A

11. TOXICOLOGICAL INFORMATION

The following data is for similar or related products.

Acute Eye Irritation: Eye – eye irritation, rabbit – slightly irritating.

Acute Skin Irritation: Skin – skin irritation, rabbit – slightly irritating.

Acute Dermal Toxicity: No test data found for this product.

Acute Respiratory Irritation: No test data found for this product.

Acute Inhalation Toxicity: No test data found for this product.

Acute Oral Toxicity: LD_{50} = 5500 mg/kg – rat.

Chronic Toxicity: This product does not contain any substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

12. ECOLOGICAL INFORMATION

Ecotoxicity Information:	No data available
Environmental Fate Information:	No data available
Chemical/Physical Information:	No data available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Chemical additions, processing or otherwise altering this material may make the waste management information in this MSDS incomplete, inaccurate or inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

14. TRANSPORTATION INFORMATION

Transportation Status: The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

US Department of Transportation Shipping Name: Not Regulated

15. REGULATORY INFORMATION

Inventory Status:

Inventory	Status
UNITED STATES (TSCA)	Y
CANADA (DSL)	Y
EUROPE (EINECS/ELINCS)	P
AUSTRALIA (AICS)	Y
JAPAN (MITI)	Y
SOUTH KOREA (KECL)	Y

Y: All ingredients are on the inventory.
E: All ingredients are on the inventory or exempt from listing.
P: One or more ingredients fall under the polymer exemption or are on the no longer polymer list. All other ingredients are on the inventory or exempt from listing.
N: Not determined or one or more ingredients are not on the inventory and are not exempt from listing.

FEDERAL REGULATIONS:
Inventory Issues: All functional components of this product are listed on the TSCA inventory.

SARA Title III Hazard Classes:

Fire Hazard	NO
Reactive Hazard	NO
Release of Pressure	NO
Acute Health Hazard	NO
Chronic Health Hazard	NO

OTHER FEDERAL REGULATIONS:
FDA Status: N/A

FIFRA Status: N/A

STATE REGULATIONS: This product contains the following components that are regulated under California Proposition 65:

Ingredient	Cancer List	Reprod. List	No Sig. Risk Lvl. (ug/day)	RPI
Dioxane	Y	N	30	ND
Ethylene Oxide	Y	Y	2	ND
Propylene Oxide	Y	N	3	ND

16. OTHER INFORMATION

National Fire Protection Association Hazard Ratings – NFPA(R):

1 Health Hazard Rating – Slight
1 Flammability Rating -- Slight
0 Reactivity Rating -- Minimal

National Paint and Coating Hazardous Materials Identification System - HMIS(R):

1 Health Hazard Rating -- Slight
1 Flammability Rating – Slight
0 Reactivity Rating -- Minimal

Reason for Revisions: Company location change. This MSDS replaces July 12, 2004, MSDS.

Key Legend Information

ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety and Health Administration
TLV	Threshold Limit Value
PEL	Permissible Exposure Limit
TWA	Time Weighted Average
STEL	Short-Term Exposure Limit
NTP	National Toxicology Program
IARC	International Agency for Research on Cancer
ND	Not determined

Disclaimer:

While the information and recommendations set forth herein are believed to be accurate, we make no warranty with respect hereto and disclaim all liability from reliance thereon.

End of MSDS Document

APPENDIX III-C

SAMPLE LOGS AND CHAINS OF CUSTODY

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 12716

PROJECT NAME Recycled Water
PROJECT NUMBER 27011-07-3200
RECORDER C. Newman
(SIGN)

SAMPLERS Castro/Murphy
(PRINT)
A. Casty Murphy
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D.] Plastic Liter
E. Brass Tube
[✓ F.] Other Plastic 250-ml

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
[✓ I.] Other treated water

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB EMlab P&K

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HN0$_3$	HCL	Field Filtered (check)	ANALYSIS REQUESTED SM9215B	SM9221B	SM9221E	SM9221F	SM5540C				TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	5/19	0845	MW-1				D/F	A	[illegible]				X	X	X	X	X				1						
2		0950	MW-2				D/F	A	[illegible]				X	X	X	X	X				1						
3		1050	MW-3				D/F	A	[illegible]				X	X	X	X	X				1						
4		1200	MW-4				D/F	A	[illegible]				X	X	X	X	X				1						
5		0700	SJ/SC treat				D/F	I	[illegible]				X	X	X	X	X				1						
6		0735	4761				D/F	I	[illegible]				X	X	X	X	X				1						
7	↓	N/A	4762				D/F	H	[illegible]					X	X	X	X				1						
8																											
9																											
10																											
11																											
12																											
13																											
14																											
15																											
16																											

NOTES / MISCELLANEOUS

Field / Container Temp.

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Murphy			
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Container Sealed with Custody Seal: Yes ☐ No ☐

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
courier	cooler	NONE	Murphy	5/19/08	1315	Logan Tran	5/19/08	203pm

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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☐ LOS ANGELES • 880 APOLLO ST., STE. 353 • EL SEGUNDO, CA 90245 • (310) 535-4600 • FAX (310) 535-4602
☐ OTHER ______________________ TEL __________ FAX __________

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 12717

PROJECT NAME Recycled Water

PROJECT NUMBER 27011-07- ~~3200~~ 4100

RECORDER C Newman (SIGN)

SAMPLERS Castro/Murphy (PRINT)

H. Castro T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
[✓ I.] Other treated water

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Laboratories

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_3PO_4	Field Filtered (check)	SM2320B	EPA 200.7	EPA 300.0	TOC-SM5310C	TDS-SM2540C				TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	5/19	845	MW-1	19.3	1016	6.24		A	3	1		1		X	X	X	X	X				1						
2		950	MW-2	19.8	631	6.51		A	3	1		1										1						
3		1050	MW-3	20.0	974	6.65		A	3	1		1										1						
4		1200	MW-4	21.8	996	6.30		A	3	1		1										1						
5		0700	SJ/SC treat	23.2	1236	7.40		I	3	1		1										1						
6		0735	4761	—	—	—		I	3	1		1										1						
7	↓	N/A	4762	—	—	—		H	3	1		1		↓	↓	↓	↓	↓				1						
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS
* see bottle label for preservative info

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
H. Castro			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
commercial courier	cooler	12718	T. Murphy	5/20/08	1600			

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ OTHER ______ TEL ______ FAX ______

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 12718

PROJECT NAME Recycled Water

PROJECT NUMBER 27011-07-~~3200~~4100

RECORDER C. Newman (SIGN)

SAMPLERS Castro / Murphy (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- [✓ A. 40-ml VOA Vial]
- B. Glass Liter
- [✓ C. Plastic 500-ml]
- D. Plastic Liter
- E. Brass Tube
- [✓ F. Other] ______

SAMPLE DESCRIPTION CODES
- [✓ A. Ground Water]
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- [✓ H. Blank/Spike]
- [✓ I. Other] treated waste

TAT CODES
- [✓ 1. Standard]
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB Weck Laboratories

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	NaOH ~~HNO3~~	HCL	NH4Cl	Field Filtered (check)	ANALYSIS REQUESTED DOC-SM5310C	EPA 524.2	EPA 552.2	EPA 314.0	SM4500CN-E				TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	5/19	845	MW-1	19.3	1016	6.24		A	2	1	2	1		X	X	X	X	X				1						
2	|	950	MW-2	19.8	621	6.51		A	2	1	2	1		|	|	|	|	|				1						
3	|	1050	MW-3	20.0	974	6.65		A	2	1	2	1		|	|	|	|	|				1						
4	|	1200	MW-4	21.8	996	6.30		A	2	1	2	1		|	|	|	|	|				1						
5	|	0700	SJ/SC plant					|	2	1	2	1		|	|	|	|	|				1						
6	|	0735	4761	—	—	—		|	2	1	2	1		|	|	|	|	|				1						
7	↓	N/A	4762	—	—	—		H	2	1	2	1		↓	↓	↓	↓	↓				1						
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS
* see bottle label for preservative info

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
commercial courier	cooler	12717	T. Murphy	5/20/08	1600			

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: ______

SAMPLES LOGGED IN BY: ______

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ *(check for yes)*

NON-COMPLIANCE SAMPLES ☑ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA....)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: MURPHY/CASTRO

TAT requested: rush by adv notice only STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	Total Phosphate EPA 365.1/03	SAMPLER COMMENTS
5/19	0845		MW-1	RGW	✓			
↓	0950		MW-2	RGW	✓			
	1050		MW-3	RGW	✓			
	1200		MW-4	RGW	✓			
	0700		SJ/SC treat	FW	✓			
	0735		4761	FW	✓			
	N/A		4762	FW	✓			

*** MATRIX TYPES:**

RSW = Raw Surface Water	CFW = Chlor(am)inated Finished Water	CWW = Chlorinated Waste Water	BW = Bottled Water	SO = Soil
RGW = Raw Ground Water	FW = Other Finished Water	WW = Other Waste Water	SW = Storm Water	SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/19/08	1500
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

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CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: ______

SAMPLES LOGGED IN BY: ______

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ *(check for yes)*
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☒ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	[illegible] 0.2	NTA and EDTA EPA 300 (mod)	Terbuthylazine EPA 525plus	SAMPLER COMMENTS
5/19	1200		MW-4	RGW	X		X	X	X	X	X	

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

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CHAIN OF CUSTODY RECORD

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MWH LABS USE ONLY:

LOGIN COMMENTS: ____

SAMPLES CHECKED AGAINST COC BY: ____

SAMPLES LOGGED IN BY: ____

SAMPLE TEMP WHEN REC'D AT LAB: ____ (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☑ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	~~[illegible]~~	NTA and EDTA - EPA 300(mod)	Terbuthylazine - EPA 525 plus											SAMPLER COMMENTS
5/19	1050		MW-3	RGW	X		X	X	~~X~~	X	X											

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ____

PAGE ____ OF ____

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CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 4 +/- 2°C)

CONDITION OF BLUE ICE: FROZEN ___ **PARTIALLY FROZEN** ___ **THAWED** ___

SAMPLES CHECKED AGAINST COC BY: ______

SAMPLES LOGGED IN BY: ______

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled water)

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ *(check for yes)*

NON-COMPLIANCE SAMPLES ☒ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA....)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX*	GRAB	COMP	NDMA - EPA 1625	PerFluorochemicals MWH LC/MS/MS	[illegible]	NTA and EDTA EPA 300(mod)	Triethylazine EPA 525plus											SAMPLER COMMENTS
5/19	0950		MW-2	RGW	X		X	X	X	X	X											

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

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CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ____________

SAMPLES CHECKED AGAINST COC BY: ____________

SAMPLES LOGGED IN BY: ____________

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ *(check for yes)*
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☒ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA....)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	PerFluoro Chemicals MWH LC/MS/MS	[illegible]	NTA and EDTA EPA 300 (mod)	Terbuthylazine EPA 525 plus											SAMPLER COMMENTS
5/19	0845		MW-1	RGW	X		X	X	X	X	X											

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE _____ OF _____

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: ______

SAMPLES LOGGED IN BY: ______

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ **PARTIALLY FROZEN** ___ **THAWED** ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled water)

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ ☐ *(check for yes)*

NON-COMPLIANCE SAMPLES ☒ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 16884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), *OR*

lists ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: TOM MURPHY

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	[illegible]	NTA and EDTA EPA 30C(mod)	Terbuthylazine EPA 525plus										SAMPLER COMMENTS
5/19	0700		SJ/SC treat	FW	X		X	X	X	X	X										

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ___ OF ___

MWH Laboratories
A Division of MWH Americas, Inc.

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Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ____

SAMPLES CHECKED AGAINST COC BY: ____

SAMPLES LOGGED IN BY: ____

SAMPLE TEMP WHEN REC'D AT LAB: ____ (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ *(check for yes)*
- Requires state forms

NON-COMPLIANCE SAMPLES ☒ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: Tom Murphy T. Murphy

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	[illegible]	NTA and EDTA EPA 30C (mod)	Terbuthylazine EPA 525 plus	SAMPLER COMMENTS
5/19	0735		4761	FW	X		X	X	~~X~~	X	X	

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	T. Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ____

PAGE ____ OF ____

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Tel: 626 386 1100
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1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ____________________

SAMPLES CHECKED AGAINST COC BY: ________

SAMPLES LOGGED IN BY: ________

SAMPLE TEMP WHEN REC'D AT LAB: ________ (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: LocusTechnologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ *(check for yes)*
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☒ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: TOM MURPHY

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA-EPA1625	Perfluorochemicals MWH LC/MS/MS	~~[illegible]~~	NTA and EDTA EPA 300 (mod)	Terbuthylazine EPA525 plus											SAMPLER COMMENTS
5/19	N/A		4762	FW	X		X	X	~~X~~	X	X											

*** MATRIX TYPES:**

RSW = Raw Surface Water	CFW = Chlor(am)inated Finished Water	CWW = Chlorinated Waste Water	BW = Bottled Water	SO = Soil
RGW = Raw Ground Water	FW = Other Finished Water	WW = Other Waste Water	SW = Storm Water	SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE _____ OF _____

LOCUS
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: IOT
Field Activity: Well Sampling
Weather: clear/sunny

Project No.: 27011-07-4100
Date: 5-19-08
Logged by: H. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
645	Prepped & loaded truck for well Sampling.
740	Arrived onsite. Checked in at main lobby.
755	AT MW-1. Take water level & calibrate meter #512.
845	Sampled MW-1.
950	Sampled MW-2.
1050	Sampled MW-3.
1200	Sampled MW-4.
1215	Pete left site with samples to deliver to office.
1225	Offloaded water into open field west of MW-4.
1245	Left site for office.
1330	Arrived at office to finish paperwork & fill out COC's

Comments/Remarks:

MV\I:\SAMPLING\Dailylog.xls\1/16/2004

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW- 1
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear/Sunny
SITE: IDT
DATE 5-19-08
PROJECT# 27011-07-4100
SAMPLER H.CASTRO

GRAB SAMPLE INFORMATION: (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER ____ YES ____ NO
PUMP CYCLING ____ YES ____ NO
pH meter: ____
METER READING ____
FLOW RATE: ____

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 32.23 TIME 800 W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 46.5
DIAMETER 4
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL –
PUMP SETTING 40'
PURGE VOLUME CALCULATION 46.5 - 32.23 = 14.27 × 1.96 = 27.96
TIME PURGE BEGINS 825
ACTUAL AMOUNT PURGED ~~30.92~~ 42.42 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
842	19.3	1017	6.23	cloudy brwn/no odor	173	0.01mg
843	19.3	1016	6.24	" " " "	174	0.19m
844	19.3	1016	6.26	" " " "	174	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D
APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID SAMPLE PORT
SAMPLING TIME 845
DATE 5-19-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL -------
PREVIOUSLY USED IN WELL 05MW-2U
SITE Marde
DECON METHOD/STEAM TIME Steam w/Tia 30min
RINSEATE SAMPLE ____ YES X NO I.D. –

SAMPLING DEVICE ID SAMPLE PORT HOSE REEL ____
PREVIOUSLY USED IN WELL ____
SITE ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ____ YES X NO ID -------
QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ____ YES X NO ID -----
FIELD BLANK ____ YES X NO ID ------
INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT

WELL\SAMPLE DESIGNATION MW-2

DATE 5-19-08

SAMPLE SOURCE A

PROJECT# 27011-07-4100

AMBIENT CONDITIONS clear/sunny

SAMPLER H.CASTRO

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:

CONTINUOUS PUMPER ___YES ___NO

PUMP CYCLING ___YES ___NO

pH meter:

METER READING

FLOW RATE:

WATER LEVEL INFORMATION

MEASURING POINT TOC

INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 30.60 TIME 915 W.L. AFTER PURGE ___ TIME ___

W.L. FOR 80% RECOVERY ___ W.L. TIME OF SAMPLE ___ DATE ___ TIME ___

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2

WELL DEPTH 45'

DIAMETER 4

#CASING VOLUMES (PROTOCOL) 3

SCREENED INTERVAL —

PUMP SETTING 40'

PURGE VOLUME CALCULATION 45' - 30.60 = 14.4 × 1.96 = 28.22 gal.

TIME PURGE BEGINS 925

ACTUAL AMOUNT PURGED ~~31.42~~ gal 43.64

pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
947	19.8	630	6.50	Cloudy brown/no odor	188	0.05 mg
948	19.8	631	6.51	" " " "	188	0.5%
949	19.8	631	6.51	" " " "	188	—

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID SAMPLE PORT

SAMPLING TIME 950

DATE 5-19-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL -------

SAMPLING DEVICE ID SAMPLE PORT HOSE REEL ___

PREVIOUSLY USED IN WELL MW-1

PREVIOUSLY USED IN WELL ___

SITE IDT

SITE ___

DECON METHOD/STEAM TIME DI water Rinse

DECON METHOD/STEAM TIME ___

RINSEATE SAMPLE ___YES X NO I D —

RINSEATE SAMPLE ___YES ___NO ID ___

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___YES X NO ID -------

QA/QC SPIKE ___YES X NO ID -------

DUPLICATE ___YES X NO ID -----

FIELD BLANK ___YES X NO ID ------

INTER-LAB SPLIT ___YES X NO ID ----

NOTES

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
DATE 5-19-08
PROJECT# 27011-07-4100
SAMPLER H.CASTRO

WELL\SAMPLE DESIGNATION MW- 3
SAMPLE SOURCE A
AMBIENT CONDITIONS clear/sunny

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ____YES ____NO pH meter: ____ FLOW RATE: ____
PUMP CYCLING ____YES ____NO METER READING ____

WATER LEVEL INFORMATION **MEASURING POINT** TOC **INSTRUMENT USED** SJ-1

W.L. BEFORE PURGE 32.02 TIME 1015 W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45' DIAMETER 4 #CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL — PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-32.02=12.98x1.96=25.44gal
TIME PURGE BEGINS 1025 ACTUAL AMOUNT PURGED 40.17gal pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1047	20.0	975	6.64	Clear/no odor	178	0.04mg
1048	20.0	974	6.65	" " "	178	0.4%
1049	20.0	974	6.65	" " "	178	

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID SAMPLE PORT SAMPLING TIME 1050 DATE 5-19-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL ------- SAMPLING DEVICE ID SAMPLE PORT HOSE REEL ____
PREVIOUSLY USED IN WELL MW-2 PREVIOUSLY USED IN WELL ____
SITE IDT SITE ____
DECON METHOD/STEAM TIME Rinse w/ DI water DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____YES X NO I D — RINSEATE SAMPLE ____YES ____NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ____YES X NO ID ------- QA/QC SPIKE ____YES X NO ID ------
DUPLICATE ____YES X NO ID ----- FIELD BLANK ____YES X NO ID ------ INTER-LAB SPLIT ____YES X NO ID ----

NOTES

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
DATE 5-19-08
PROJECT# 27011-07-4100
SAMPLER H.CASTRO

WELL\SAMPLE DESIGNATION MW- 4
SAMPLE SOURCE A
AMBIENT CONDITIONS clear/sunny

GRAB SAMPLE INFORMATION: (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ____ YES ____ NO ____ pH meter: ____ FLOW RATE: ____
PUMP CYCLING ____ YES ____ NO ____ METER READING ____

WATER LEVEL INFORMATION **MEASURING POINT** TOC **INSTRUMENT USED** SJ-1

W.L. BEFORE PURGE 34.93 TIME 1130 W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** C

PURGE DEVICE I.D GRUND-2
WELL DEPTH 45' DIAMETER 4 #CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL — PUMP SETTING 40'
PURGE VOLUME CALCULATION 45 - 34.93 = 10.07 X 1.96 = 19.73 gal.
TIME PURGE BEGINS 1140 ACTUAL AMOUNT PURGED 26.17 gal pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1157	21.8	995	6.29	clear/no odor	192	0.05mg
1158	21.8	996	6.30	" " "	192	0.3%
1159	21.8	996	6.30	" " "	192	

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID SAMPLE PORT SAMPLING TIME 1200 DATE 5-19-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL ------- SAMPLING DEVICE ID SAMPLE PORT HOSE REEL ____
PREVIOUSLY USED IN WELL MW-3 PREVIOUSLY USED IN WELL ____
SITE IDT SITE ____
DECON METHOD/STEAM TIME Rinse W/DI water DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES X NO I D — RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ____ YES X NO ID ------- QA/QC SPIKE ____ YES X NO ID -------
DUPLICATE ____ YES X NO ID ----- FIELD BLANK ____ YES X NO ID ------ INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SJ/SC Treatment System
Field Activity: SAMPLING
Weather: clear/sunny

Project No.: 27011-07-4100
Date: 5/12/08
Logged by: MURPHY
Page: 1 of

TIME	DAILY ACTIVITIES AND EVENTS
0635	ARRIVE AT GATE ON ZANKER ROAD. BRIAN BERDEEN IS NOT LETTING ME IN WITHOUT SOME AUTHORIZATION. I GIVE HIM THE NAME OF KEN ROCK.
0645	BRIAN CALLS ME BACK, SAYS HE HAS AUTHORIZATION
0700	SOMEONE FINALLY ARRIVES TO LET ME IN.
0705	BEGIN SAMPLING ~~& TAKING PARAMETERS~~
0715	TAKE PARAMETERS
0740	TAKE PARAMETERS
0755	TAKE PARAMETERS
0805	SAMPLING COMPLETE & DEPARTING SITE. HEAD TO IDT
1030	RETURN TO MV OFFICE TO COMPLETE PAPERWORK & PACKAGE SAMPLES

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION SJ/SC TREAT
SAMPLE SOURCE D
AMBIENT CONDITIONS clear/sunny
SITE: S.C. Valley Water Dist.
DATE 5-19-08
PROJECT# 27011-07-4100
SAMPLER T. Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: A
CONTINUOUS PUMPER X YES ___ NO
PUMP CYCLING ___ YES NO
pH meter: #309 FLOW RATE: ___
METER READING ___

WATER LEVEL INFORMATION

MEASURING POINT ___ INSTRUMENT USED ___

W.L. BEFORE PURGE ___ TIME ___ W.L. AFTER PURGE ___ TIME ___
W.L. FOR 80% RECOVERY ___ W.L. TIME OF SAMPLE ___ DATE ___ TIME ___

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD ___

PURGE DEVICE I.D. ___
WELL DEPTH ___ DIAMETER ___ #CASING VOLUMES (PROTOCOL) ___
SCREENED INTERVAL ___ PUMP SETTING ___
PURGE VOLUME CALCULATION ___
TIME PURGE BEGINS ___ ACTUAL AMOUNT PURGED ___ pH INSTRUMENT ___

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	TURBIDITY
0715	23.5	1243	7.41	CLEAR/NO ODOR	—
0740	23.3	1240	7.39	CLEAR/NO ODOR	—
0755	22.7	1231	7.41	CLEAR/NO ODOR	—

WATER SAMPLING INFORMATION

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID Sample Port SAMPLING TIME 0700 DATE 5-19-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
						None

DECONTAMINATION INFORMATION

PURGE DEVICE ID ___ HOSE REEL ___ SAMPLING DEVICE ID ___ HOSE REEL ___
PREVIOUSLY USED IN WELL ___ PREVIOUSLY USED IN WELL ___
SITE ___ SITE ___
DECON METHOD/STEAM TIME ___ DECON METHOD/STEAM TIME ___
RINSEATE SAMPLE ___ YES ___ NO ID ___ RINSEATE SAMPLE ___ YES ___ NO ID ___

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK X YES ___ NO ID ___ QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE X YES ___ NO ID ___ FIELD BLANK ___ YES ___ NO ID ___ INTER-LAB SPLIT ___ YES X NO ID -----

NOTES	DISOLVED OXYGEN	ORP	CHLORINE
0715	.4%/0.03 mg/L	405	8.8
0740	.4%/0.04 mg/L	424	8.8
0755	.5%/0.04 mg/L	422	8.8

MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY: PAGE 2 OF 2

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: ______

SAMPLES LOGGED IN BY: ______

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 6° or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___ *(check for yes)*

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ ☐

NON-COMPLIANCE SAMPLES ☐ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: Locus

P.O.# / JOB # / PROJECT: 27011-07-4200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☑ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only

STD X 1 week __ 3 day __ 2 day __ 1 day __

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP																SAMPLER COMMENTS
10/27/10	~~1130~~ 1210	MW1	MW1	RGW	X																	
|	1105	MW2	MW2	RGW	X																	
|	855	MW3	MW3	RGW	X																	
|	1005	MW4	MW4	RGW	X																	

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ___ OF ___

MWH Laboratories
MONTGOMERY WATSON HARZA

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY: PAGE 2 OF 2

LOGIN COMMENTS: ____________________

SAMPLES CHECKED AGAINST COC BY: ____________

SAMPLES LOGGED IN BY: ____________

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 6° or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___
(check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

COMPLIANCE SAMPLES ☐
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE. Locus

P.O.# / JOB # / PROJECT : 77011-07-4200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☒ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE.

TAT requested: rush by adv notice only

STD X 1 week __ 3 day __ 2 day __ 1 day __

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP																SAMPLER COMMENTS
10/23/07		L5 COMP		RGW		X																
10/27/07		L10 COMP		RGW		X																

* MATRIX TYPES:

RSW = Raw Surface Water	CFW = Chlor(am)inated Finished Water	CWW = Chlorinated Waste Water	BW = Bottled Water	SO = Soil
RGW = Raw Ground Water	FW = Other Finished Water	WW = Other Waste Water	SW = Storm Water	SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories
MONTGOMERY WATSON HARZA

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ____________________

SAMPLES CHECKED AGAINST COC BY: ____________

SAMPLES LOGGED IN BY: ____________

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 6°C or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___
(check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

COMPLIANCE SAMPLES ☐
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: Locus

P.O.# / JOB # / PROJECT: 77011-07-4200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☒ (check for yes), OR
LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE: MURPHY

TAT requested: rush by adv notice only
STD X 1 week ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	SAMPLER COMMENTS
10/27/08	1145	SOURCE		FW	X		

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

1

CHAIN OF CUSTODY

EMLab P&K

www.EMLabPK.com

Cherry Hill, NJ: 1936 Olney Avenue, Cherry Hill, NJ 08003 • **(866) 871-1984**
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 • **(800) 651-4802**
San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 • **(866) 888-6653**

WEATHER	Fog	Rain	Snow	Wind	Clear
LEVEL: None	✓	✓	✓	✓	
Light					
Moderate					
Heavy					

CONTACT INFORMATION

Company: LOCUS TECHNOLOGIES
Contact: NORMAN WONG
Phone: 650-960-1640
Address: 299 FAIRCHILD DRIVE MV CA 94043
Special Instructions:

PROJECT INFORMATION

Project ID: 27011-07-4200
Project Desc.: Recycled Water Study
Project Zip Code:
Sampling Date & Time: 10/27/08
PO Number:

TURN AROUND TIME CODES - (TAT)

STD - Standard (DEFAULT)
ND - Next Business Day
SD - Same Business Day Rush
WH - Weekend/Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

SAMPLE ID	DESCRIPTION	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	NOTES (Time of day, Temp, RH, etc.)
MW1		W	STD	1 LITER	
MW2		W	STD	1 LITER	
MW3		W	STD	1 LITER	
MW4		W	STD	1 LITER	
L5 COMP		W	STD	150 ml (MIN)	
L10 COMP		W	STD	150 ml (MIN)	
SOURCE		W	STD	1 LITER	

REQUESTED SERVICES (✓ Boxes)

	Non-Culturable				Culturable												Other Requests					
	Spore Trap		Tape Swab Bulk		BioCassette™ Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plate																	
SAMPLE ID	Fungi - Spore Trap Analysis	Spore Trap Analysis - Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp* spp.)	Gram Stain and Counts (Culturable Air and Surface Bacteria)	*Legionella* culture	Total Coliform, *E.coli* (Presence/Absence)	Membrane Filtration (Please specify organism)	MPN Bacteria (Please specify organism) Total & Fecal Coliform	QuantiTray - Sewage Screen	Asbestos Analysis - PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis - PLM (EPA method 600/R-93-116)	PCR (please specify test)	HPC	MPN BACTERIA - E. coli			
MW1													X					X				
MW2													X					X				
MW3													X					X				
MW4													X					X				
L5 COMP													X					X				
L10 COMP													X					X				
SOURCE													X					X	X			

SAMPLE TYPE CODES

BC - BioCassette™
A1S - Andersen
SAS - Surface Air Sampler
O - Other:
CP - Contact Plate
ST - Spore Trap: Zefon, Allergenco, Burkard..
T - Tape
SW - Swab
B - Bulk
D - Dust
W - Water
SO - Soil

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
Pete Austin	10/27/08 13:25	Logan Tr	10/27/08 1327

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html

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LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14346

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ______ (SIGN)

SAMPLERS CASTRO / MURPHY (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F.] Other 250ml Poly

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Accutest

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE			Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION				Field Filtered (check)	ANALYSIS REQUESTED									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
				TEMP °C	COND micromhos/cm	pH			Unpreserved	HNO_3	HCL			Bromide															
1	10/8[illegible]/08		SOURCE				F	A	1					X									1		✓				
2			MW1				F	A	1					X									1		✓				
3			MW2				F	A	1					X									1		✓				
4			MW3				F	A	1					X									1		✓				
5			MW4				F	A	1					X									1		✓				
6			~~L5 COMP~~				F	A	1					X									1		✓				
7	11/21/08		L10 COMP				F	A	1					X									1		✓				
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
	X	10/27/08	12:41
X Pete Austin			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
DROP OFF	Cooler			11/2[illegible]/08	1215			

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14339

PROJECT NAME Recycled Water study
PROJECT NUMBER 27011-07-4200
RECORDER T. Murphy (SIGN)

SAMPLERS ~~T~~ MURPHY (PRINT)
T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
(A) 40-ml VOA Vial
(B) Glass Liter
(C) Plastic 500-ml
(D) Plastic Liter
(E) ~~Brass Tube~~ 250 mL poly
(F) Other 250 mL glass

SAMPLE DESCRIPTION CODES
(A) Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
(1) Standard
2. 48 Hour
3. 24 Hour
4. Other ________

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. ________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	See note *	6010 metals *	TOC	TDS	DOC	8010	HAA5	Total Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1			~~L2-5~~ L5 COMP	16.3	2434	6.43	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							F	A				1						X					1		✓				
6							A	A			2								X				1		✓	✓			
7							B	A	1											X			1		✓				
8			~~L2-10~~ L10 COMP	16.7	1682	6.55	D	A	1					X									1		✓				
9							C	A		1					X								1		✓				
10							F	A				1				X							1		✓				
11							E	A	1								X						1		✓				
12							F	A				1						X					1		✓				
13							A	A			2								X				1		✓	✓			
14							B	A	1											X			1		✓				
15			L5 COMP	16.3	2434	6.43	E	A				1									X		1		✓				
16			L10 COMP	16.7	1682	6.55	E	A				1									X		1		✓				

NOTES / MISCELLANEOUS
* boron, calcium, magnesium, sodium, potassium
* alkalinity, sulfate, nitrite, nitrate, chloride

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14337 14342 14343 14344 14348	Thomas Murphy	10/27/08	1500		10/27/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ OTHER ________________ TEL ________ FAX ________

REV. 6/02

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LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14342

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS CASTRO (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
(A) 40-ml VOA Vial 250 ml
(B) Glass Liter
(C) Plastic 500-ml
(D) Plastic Liter
(E) ~~Brass Tube~~ 250 ml
(F) Other 250 ml GLASS

SAMPLE DESCRIPTION CODES
(A) Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
(1.) Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB CURTIS & TOMPKINS

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	8010	HAAS	6010 METALS *	SEE NOTE **	TOC	DOC	TDS	TOTAL PHOSPHATE	SURFACTANTS	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	10/27/08	855	MW3	17.2	905	6.79	A	A			3			X									1		✓	✓			
2		855					B	A	1						X								1		✓				
3		855					C	A		1						X							1		✓				
4		855					D	A	1								X						1		✓				
5		855					E	A	1											X			1		✓				
6		855	↓	↓	↓	↓	F	A				2						X	X				1		✓				
7		1005	MW4	18.3	949	6.84	A	A			3			X									1		✓	✓			
8		1005					B	A	1						X								1		✓				
9		1005					C	A		1						X							1		✓				
10		1005					D	A	1								X						1		✓				
11		1005					E	A	1											X			1		✓				
12		1005	↓	↓	↓	↓	F	A				2						X	X				1		✓				
13		855	MW3	17.2	905	6.79	E	A				1									X		1		✓				
14		855	MW3	17.2	905	6.79	D	A	1													X	1		✓				
15	↓	1005	MW4	18.3	949	6.84	E	A				1									X		1		✓				
16		1005	MW4	18.3	949	6.84	D	A	1													X	1		✓				

NOTES / MISCELLANEOUS
* BORON / CALCIUM / MAGNESIUM / SODIUM / POTASIUM
** ALKALINITY / SULFATE / NITRITE / NITRATE / CHLORIDE

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	14337 14339 14343 14344 14348		10/27/08	1500		10/27/08	1500

Send Lab Results to (Name): WES HAWTHORNE CC NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14343

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ~~Curt~~ T. Murphy (SIGN)
SAMPLERS T. Murphy (SIGN)
T. MURPHY (PRINT)

SAMPLE CONTAINER DESCRIPTION CODES
- Ⓐ 40-ml VOA Vial
- Ⓑ Glass Liter
- Ⓒ Plastic 500-ml
- Ⓓ Plastic Liter
- Ⓔ ~~Brass Tube~~ 250ml poly
- Ⓕ Other 250ml glass

SAMPLE DESCRIPTION CODES
- Ⓐ Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other

TAT CODES
- ① Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	See note **	6010 metals *	TOC	TDS	DOC	8010	HAA5	Total phosphate	Surfactants	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	10/27/08	1145	SOURCE	21.9	1481	6.75	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	F	A				1						X					1		✓				
6	↓	↓	↓	↓	↓	↓	A	A			3								X				1		✓	✓			
7	↓	↓	↓	↓	↓	↓	B	A	1											X			1		✓				
8	↓	↓	↓	↓	↓	↓	E	A				1									X		1		✓				
9	↓	↓	↓	↓	↓	↓	D	A	1													X	1		✓				
10	↓	↓																											
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
* BORON, CALCIUM, MAGNESIUM, SODIUM, POTASSIUM
** ALKALINITY, SULFATE, NITRITE, NITRATE, CHLORIDE

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14337 14339 14342 14344 14348	Thomas Murphy	10/28/08	1500		10/28/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) ✓ Verbals Requested: Yes ☑ No ☐

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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14337

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER T. M
SAMPLERS CASTRO (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
Ⓐ 40-ml VOA Vial
Ⓑ Glass Liter
Ⓒ Plastic 500-ml
Ⓓ Plastic Liter
Ⓔ ~~Brass Tube~~ 250ml POLY
Ⓕ Other 250ml GLASS

SAMPLE DESCRIPTION CODES
Ⓐ Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
① Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB CURTIS & TOMPKINS

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	8010	HAAS	6010 METALS *	SEE NOTE **	TOC	DOC	TDS	TOTAL PHOSPHATE	SURFACTANTS	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	10/27/08	1210	MW1	19.8	865	6.75	A	A			3			X									1		✓	✓			
2		1210	MW1				B	A	1						X								1		✓				
3		1210	MW1				C	A		1						X							1		✓				
4		1210	MW1				D	A	1								X						1		✓				
5		1210	MW1				E	A	1											X			1		✓				
6		1210	MW1				F	A				2						X	X				1		✓				
7		1105	MW2	19.4	719	6.80	A	A			3			X									1		✓	✓			
8		1105	MW2				B	A	1						X								1		✓				
9		1105	MW2				C	A		1						X							1		✓				
10		1105	MW2				D	A	1								X						1		✓				
11		1105	MW2				E	A	1											X			1		✓				
12		1105	MW2				F	A				2						X	X				1		✓				
13		1210	MW1	19.8	865	6.75	E	A				1									X		1		✓				
14		1210	MW1	19.8	865	6.75	D	A	1													X	1		✓				
15		1105	MW2	19.4	719	6.80	E	A				1									X		1		✓				
16		1105	MW2	19.4	719	6.80	D	A	1													X	1		✓				

NOTES / MISCELLANEOUS
* BORON/CALCIUM/MAGNESIUM/SODIUM/POTASIUM
** ALKALINITY/SULFATE/NITRITE/NITRATE/CHLORIDE

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. M			
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	14339 14342 14343 14344 14348		10/27/08	1500		10/27/08	1500

Send Lab Results to (Name): WES HAWTHORNE CC NORMAN WONG (Check Office Below)

Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14344

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER T. Murphy (SIGN)
SAMPLERS T. MURPHY (PRINT)
T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
[✓ C.] Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F.] ~~Other~~ 250 ml. poly

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. ____________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL	NaOH	Field Filtered (check)	ANALYSIS REQUESTED perchlorate	cyanide								TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	10/27/08	1145	SOURCE	21.9	1427	6.75	F	A	1					X									1		✓				
2	10/27/08	1145	SOURCE				C	A				1			X								1		✓				
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
courier	cooler	14337, 14339, 14342, 14343, 14348	Thomas Murphy	10/27/08	1500		10/27/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______________________ TEL __________ FAX __________

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14348

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER T. Murphy (SIGN)

SAMPLERS CASTRO/MURPHY (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D.] Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL	Field Filtered (check)	ANALYSIS REQUESTED SURFACTANTS									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	10/27/08	—	L5COMP	16.3	2434	6.42	D	A	1				X									1		✓				
2		—	L10 COMP	16.7	1662	6.55	D	A	1				X									1		✓				
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	14337, 14339, 14342 14343, 14344	Thomas Murphy	10/27/08	1500		10/27/08	1500

Send Lab Results to (Name): WES HAWTHORNE CC NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: ~~FOT~~ SCVWD

Field Activity: Well Sampling

Weather: cool

Project No.: 27011-07-4200

Date: 10-27-08

Logged by: A. Castro Sr

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
630	Prepped & loaded truck,
740	Arrived onsite. Checked in at main lobby. Calibrated ultra
	meter #312, Coned off wells.
810	AT MW-3. Take DO reading.
855	Sampled MW-3.
930	AT MW-4. Take DO reading.
1005	Sampled MW-4.
1030	AT MW-2. Take DO reading.
1105	Sampled MW-2.
1130	AT MW-1. Take DO reading.
1210	Sampled MW-1.
1245	Offloaded water in field.
1305	Left site for office.
1345	Arrived at office.

Comments/Remarks:

MV\I:\SAMPLING\Dailylog.xls\1/16/2004

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
DATE 10-27-08
WELL\SAMPLE DESIGNATION MW-3
PROJECT# 27011-07-~~4100~~ 4200
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter: ____ FLOW RATE: ____
METER READING ____

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 34.12 TIME 817 W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-34.12 = 10.88 × 1.96 = 21.32 gal
TIME PURGE BEGINS 835
ACTUAL AMOUNT PURGED 48.16 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
852	17.2	904	6.80	clear/no odor	144	9.5%
853	17.2	905	6.79	" " "	144	0.88 mg/L
854	17.2	905	6.79	" " "	145	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D
APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/sample port
SAMPLING TIME 855
DATE 10-27-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2
HOSE REEL -------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL RE-9A
PREVIOUSLY USED IN WELL ____
SITE Raytheon
SITE ____
DECON METHOD/STEAM TIME Steam w/ liq 30min
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ___ YES X NO I D —
RINSEATE SAMPLE ___ YES ___ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES X NO ID — QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES (Purged at 3 GPM)

CHLORINE: 0.28 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: **IDT**
WELL\SAMPLE DESIGNATION **MW-** 4
DATE 10-27-08
SAMPLE SOURCE **A**
PROJECT# **27011-07-~~4400~~** 4200
AMBIENT CONDITIONS **Clear & Sunny**
SAMPLER **H.CASTRO/ T.Murphy**

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: CONTINUOUS PUMPER YES NO pH meter FLOW RATE:
PUMP CYCLING YES NO METER READING

WATER LEVEL INFORMATION MEASURING POINT **TOC** INSTRUMENT USED **SJ-1**

W.L. BEFORE PURGE 37.50 TIME 928 W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** **C**

PURGE DEVICE I.D. **GRUND-2**
WELL DEPTH 45' DIAMETER **4"** #CASING VOLUMES (PROTOCOL) **3**
SCREENED INTERVAL ------ PUMP SETTING 40'
PURGE VOLUME CALCULATION 45' - 37.50 = 7.50 x 1.96 = 14.70 gal.
TIME PURGE BEGINS 945 ACTUAL AMOUNT PURGED 38.24 gal pH INSTRUMENT **ULTRA#312**

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1002	18.3	950	6.83	cloudy / no odor	92	6.7%
1003	18.3	949	6.84	" " "	91	0.61 mg/L
1004	18.3	949	6.84	" " "	91	

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** **D**

APPROXIMATE DEPTH OF GRAB **N/A**
SAMPLING DEVICE ID **GRUND-2** w/sample port SAMPLING TIME 1005 DATE **10-27-08**

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID **GRUND-2** HOSE REEL ------ SAMPLING DEVICE ID **SAMPLE PORT**
PREVIOUSLY USED IN WELL MW-3 PREVIOUSLY USED IN WELL ____
SITE IDT SITE ____
DECON METHOD/STEAM TIME Rinse w/DI water DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO I D ____ RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ____ YES X NO ID — QA/QC SPIKE ____ YES **X** NO ID ------
DUPLICATE ____ YES **X** NO ID ------ FIELD BLANK ____ YES **X** NO ID ------ INTER-LAB SPLIT ____ YES **X** NO ID ----

NOTES

CHLORINE: 1.22 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW- 2
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny
SITE: IDT
DATE 10-27-08
PROJECT# 27011-07-~~4100~~ 4200
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ___YES ___NO pH meter: ____ FLOW RATE: ____
PUMP CYCLING ___YES ___NO METER READING ____

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 32.85 TIME 1030 W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-32.85=12.15×1.96=23.81gal
TIME PURGE BEGINS 1035
ACTUAL AMOUNT PURGED 44.54gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1103	19.4	719	6.80	Silty/cloudy / no odor	117	7.8%
1103	19.4	719	6.81	" " "	118	0.74mg/L
1104	19.4	718	6.80	" " "	118	

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/sample port SAMPLING TIME 1105 DATE 10-27-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 ~~w/ sample port~~ HOSE REEL ------
PREVIOUSLY USED IN WELL MW-4
SITE IDT
DECON METHOD/STEAM TIME Rinse w/ DI water
RINSEATE SAMPLE ___YES ___NO ID ____
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____
SITE ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ___YES ___NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___YES X NO ID — QA/QC SPIKE ___YES X NO ID ------
DUPLICATE ___YES X NO ID ------ FIELD BLANK ___YES X NO ID ------ INTER-LAB SPLIT ___YES X NO ID ----

NOTES

CHLORINE: 2.20 mg/L / very silty

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 1
DATE 10-27-08
SAMPLE SOURCE A
PROJECT# 27011-07-~~4100~~ 4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER ___YES ___NO
PUMP CYCLING ___YES ___NO
pH meter:
METER READING
FLOW RATE:

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 34.48 TIME 1120 W.L. AFTER PURGE ___ TIME ___
W.L. FOR 80% RECOVERY ___ W.L. TIME OF SAMPLE ___ DATE ___ TIME ___

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 46.5
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 46.5-34.48=12.02×1.96=23.55
TIME PURGE BEGINS 1130
ACTUAL AMOUNT PURGED 46.57 gal.
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1207	19.8	864	6.74	cloudy brown/no odor	126	1.47 mg/L
1208	19.8	865	6.75	" " " "	127	15.4%
1209	19.8	865	6.75	" " " "	127	

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/sample port SAMPLING TIME 1210 DATE 10-27-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2/~~40~~ ~~Sample Port~~ HOSE REEL ------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-2
PREVIOUSLY USED IN WELL ___
SITE IDT
SITE ___
DECON METHOD/STEAM TIME Rinse w/ [illegible]
DECON METHOD/STEAM TIME ___
RINSEATE SAMPLE ___YES ___NO I D ___
RINSEATE SAMPLE ___YES ___NO ID ___

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___YES ✓ NO ID — QA/QC SPIKE ___YES X NO ID ------
DUPLICATE ___YES X NO ID ------ FIELD BLANK ___YES X NO ID ------ INTER-LAB SPLIT ___YES X NO ID ----

NOTES

CHLORINE: 2.17 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION ~~MW~~ SOURCE
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny

SITE: IDT
DATE 10/27/08
PROJECT# 27011-07-~~4100~~ 4200
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER ___YES___NO
PUMP CYCLING ___YES___NO
pH meter:
METER READING
FLOW RATE:

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

N/A
W.L. BEFORE PURGE ______ TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH N/A
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING
PURGE VOLUME CALCULATION
TIME PURGE BEGINS
ACTUAL AMOUNT PURGED
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1145	21.9	1427	6.75	CLEAR / NO ODOR	128	21.0%
	21.9	1424	6.75	" "		1.60 mg/L
	21.9	1427	6.75	" "		

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID ~~GRUND-2~~
SAMPLING TIME 1145
DATE 10-27-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

N/A
PURGE DEVICE ID GRUND-2 HOSE REEL -------
PREVIOUSLY USED IN WELL
SITE
DECON METHOD/STEAM TIME
RINSEATE SAMPLE ____YES____NO I D ______

SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL
SITE
DECON METHOD/STEAM TIME
RINSEATE SAMPLE ____YES____NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK___YES ✓ NO ID______ QA/QC SPIKE____YES X NO ID ------
DUPLICATE____YES X NO ID ------ FIELD BLANK____YES X NO ID ------ INTER-LAB SPLIT____YES X NO ID ----

NOTES

CHLORINE: 0.30 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: **IDT**
WELL\SAMPLE DESIGNATION ~~MW~~ LS COMP
DATE 10/27/08
SAMPLE SOURCE A
PROJECT# 27011-07-~~4100~~ 4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER ___YES ___NO
PUMP CYCLING ___YES ___NO
pH meter:
FLOW RATE:
METER READING

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE N/A TIME
W.L. AFTER PURGE
TIME
W.L. FOR 80% RECOVERY
W.L. TIME OF SAMPLE
DATE
TIME

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. ~~GRUND-2~~
WELL DEPTH N/A
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL -----
PUMP SETTING
PURGE VOLUME CALCULATION
TIME PURGE BEGINS
ACTUAL AMOUNT PURGED
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1000	16.3	2434	6.43	slightly Brown / no odor	25	56.6% 5.84mg/l

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID ~~GRUND-2~~ GRAB
SAMPLING TIME COMP
DATE 10-27-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2
HOSE REEL --------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL N/A
PREVIOUSLY USED IN WELL
SITE
SITE
DECON METHOD/STEAM TIME
DECON METHOD/STEAM TIME
RINSEATE SAMPLE ___YES ___NO I D
RINSEATE SAMPLE ___YES ___NO ID

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___YES X NO ID ___ QA/QC SPIKE ___YES X NO ID ------
DUPLICATE ___YES X NO ID ------ FIELD BLANK ___YES X NO ID ------ INTER-LAB SPLIT ___YES X NO ID ----

NOTES

CHLORINE: 0.13 mg/L

MVI:\SAMPLING\Samplog\10/27/2008

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: **IDT**
WELL\SAMPLE DESIGNATION ~~MW~~ L10 COMP
DATE 10/27/08
SAMPLE SOURCE **A**
PROJECT# **27011-07-~~4400~~** 4200
AMBIENT CONDITIONS **Clear & Sunny**
SAMPLER **H.CASTRO/ T.Murphy**

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:_____
CONTINUOUS PUMPER ___YES ___NO
PUMP CYCLING ___YES ___NO
pH meter:_____
METER READING _____
FLOW RATE: _____

WATER LEVEL INFORMATION

MEASURING POINT **TOC**
INSTRUMENT USED **SJ-1**

W.L. BEFORE PURGE N/A TIME_____ W.L. AFTER PURGE_____ TIME_____
W.L. FOR 80% RECOVERY_____ W.L. TIME OF SAMPLE_____ DATE_____ TIME_____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD **C**

PURGE DEVICE I.D. **GRUND-2**
WELL DEPTH N/A
DIAMETER **4"**
#CASING VOLUMES (PROTOCOL) **3**
SCREENED INTERVAL **------**
PUMP SETTING_____
PURGE VOLUME CALCULATION_____
TIME PURGE BEGINS_____
ACTUAL AMOUNT PURGED_____
pH INSTRUMENT **ULTRA#312**

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1000	16.7	1682	6.55	Slight brown/ NO ODOR	69	55.8% 6.21 mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD **D**

APPROXIMATE DEPTH OF GRAB **N/A**
SAMPLING DEVICE ID **GRUND-2**
SAMPLING TIME_____
DATE **10-27-08**

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID **GRUND-2** HOSE REEL **--------**
SAMPLING DEVICE ID **SAMPLE PORT**
PREVIOUSLY USED IN WELL_____
PREVIOUSLY USED IN WELL_____
SITE_____
SITE_____
DECON METHOD/STEAM TIME_____
DECON METHOD/STEAM TIME_____
RINSEATE SAMPLE___YES___NO I D_____
RINSEATE SAMPLE___YES___NO ID_____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK___YES ✓ NO ID_____ QA/QC SPIKE___YES **X** NO ID **------**
DUPLICATE___YES **X** NO ID **------** FIELD BLANK___YES **X** NO ID **------** INTER-LAB SPLIT___YES **X** NO ID **----**

NOTES

CHLORINE: 0.06 Mg/L

MV\I:\SAMPLING\Samplog\10/27/2008

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14401

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ____________ (SIGN)

SAMPLERS Castro/Murphy (PRINT)
____________ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 poly
[✓ F.] Other 250 Glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
I. Other ____

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ____

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. ____

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO$_3$	HCL	H$_2$SO$_4$	Field Filtered (check)	ANALYSIS REQUESTED: See note 1	See note 2	TOC	TDS	DOC	8010/8020	HAAC	Tot Phosphate	Temperature	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12/15/08	—	4877	—	—	—	D	H	1					X									1		✓				
2	|	—	|	—	—	—	C	H		1					X								1		✓				
3	|	—	|	—	—	—	F	H								X							1		✓				
4	|	—	|	—	—	—	E	H	1								X						1		✓				
5	|	—	|	—	—	—	F	H										X					1		✓				
6	|	—	|	—	—	—	A	H			3								X				1		✓	✓			
7	|	—	|	—	—	—	B	H	1											X			1		✓				
8	|	—	↓	—	—	—	E	H				1									X		1		✓				
9	↓	—	Temp Blank	—	—	—	A	H	1													X	1	*	✓		*		
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity/Sulfate/Nitrate/Nitrite/Chloride/Bromide
2. Boron/Calcium/Magnesium/Sodium/Potassium
*Temp. to be measured & recorded upon receipt of samples at lab

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14-396,397,398,399,400	Murphy	12/15/08	1500		12/15/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ____________ TEL ________ FAX ________

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14400

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ____________ (SIGN)

SAMPLERS Castro/Murphy (PRINT)
____________ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- (A.) 40-ml VOA Vial
- (B.) Glass Liter
- (C.) Plastic 500-ml
- (D.) Plastic Liter
- (E.) ~~Brass Tube~~ 250 poly
- (F.) Other 250 glass

SAMPLE DESCRIPTION CODES
- (A.) Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other ________

TAT CODES
- (1.) Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. ____________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	See Note 1	See Note 2	TOC	TDS	DOC	8010/8020	HAA6	Tot Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12/15/08	1000	Source	10.9	1156	7.65	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							F	A				1						X					1		✓				
6							A	A			3								X				1		✓	✓			
7							B	A	1											X			1		✓				
8		↓	↓	↓	↓	↓	E	A				1									X		1		✓				
9		—	4876	—	—	—	D	A	1					X									1		✓				
10		—		—	—	—	C	A		1					X								1		✓				
11		—		—	—	—	F	A				1				X							1		✓				
12		—		—	—	—	E	A	1								X						1		✓				
13		—		—	—	—	F	A				1						X					1		✓				
14		—		—	—	—	A	A			3								X				1		✓	✓			
15		—		—	—	—	B	A	1											X			1		✓				
16	↓	—	↓	—	—	—	E	A				1									X		1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity/Sulfate/Nitrate/Nitrite/Chloride/Bromide
2. Boron/Calcium/Magnesium/Sodium/Potasium

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14-396,397,398,399,401	Thomas Murphy	12/15/08	1500		12/15/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ____________ TEL ________ FAX ________

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14399

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

SAMPLERS Castro/Murphy (PRINT)

(SIGN)

RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- [✓ A.] 40-ml VOA Vial
- [✓ B.] Glass Liter
- [✓ C.] Plastic 500-ml
- [✓ D.] Plastic Liter
- [✓ E.] ~~Brass Tube~~ 250 Poly
- [✓ F.] Other 250 Glass

SAMPLE DESCRIPTION CODES
- [✓ A.] Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other

TAT CODES
- [✓ 1.] Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE			Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION				Field Filtered (check)	ANALYSIS REQUESTED									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
				TEMP °C	COND micromhos/cm	pH			Unpreserved	HNO_3	HCL	H_2SO_4		See Note 1	See Note 2	TOC	TDS	DOC	8010/8020	HAAs	Tot Phosphate								
1	12/15/08	900	L-5 COMP	12.4	2146	7.66	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							F	A				1						X					1		✓				
6							A	A			3								X				1		✓	✓			
7							B	A	1											X			1		✓				
8		↓	↓	↓	↓	↓	E	A				1									X		1		✓				
9		1000	L-10 COMP	13.6	1655	7.84	D	A	1					X									1		✓				
10							C	A		1					X								1		✓				
11							F	A				1				X							1		✓				
12							E	A	1								X						1		✓				
13							F	A				1						X					1		✓				
14							A	A			3								X				1		✓	✓			
15							B	A	1											X			1		✓				
16	↓	↓	↓	↓	↓	↓	E	A				1									X		1		✓				

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

1. Alkalinity/Sulfate/Nitrate/Nitrite/Chloride/Bromide
2. Boron/Calcium/Magnesium/Sodium/Potasium

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14-396,397,398,400,401	Thomas Murphy	12/15/08	1500		12/15/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739

☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101

☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14398

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ______ (SIGN)

SAMPLERS CASTRO / MURPHY (PRINT)
______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A]. 40-ml VOA Vial
[✓ B]. Glass Liter
[✓ C]. Plastic 500-ml
[✓ D] Plastic Liter
[✓ E]. ~~Brass Tube~~ 250 poly
[✓ F]. Other 250 Glass

SAMPLE DESCRIPTION CODES
[✓ A]. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1]. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB CURTIS & TOMPKINS

LABORATORY USE ONLY
LAB PROJECT NO. ______

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED													LABORATORY USE ONLY		
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HN0₃	HCL	H2SO4	Field Filtered (check)	SEE NOTE 1	SEE NOTE 2	TOC	TDS	DOC	8010/8020	HAA	Tot Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12/15/08	845	MW-3	17.1	909	6.86	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							F	A				1						X					1		✓				
6							A	A			3								X				1		✓	✓			
7							B	A	1											X			1		✓				
8		↓	↓	↓	↓	↓	E	A				1									X		1		✓				
9		940	MW-4	18.1	946	6.87	D	A	1					X									1		✓				
10							C	A		1					X								1		✓				
11							F	A				1				X							1		✓				
12							E	A	1								X						1		✓				
13							F	A				1						X					1		✓				
14							A	A			3								X				1		✓	✓			
15							B	A	1											X			1		✓				
16	↓	↓	↓	↓	↓	↓	E	A				1									X		1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity/Sulfate/Nitrate/Nitrite/Chloride/Bromide
2. Boron/Calcium/Magnesium/Sodium/Potasium

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	14-396,397,399,400,401	Murphy	12/15/08	1500		12/15/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14396

PROJECT NAME Recycled Water Study
SAMPLERS Castro/Murphy (PRINT)
_____ (SIGN)
PROJECT NUMBER J7011-07-4200
RECORDER _____ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
(A) 40-ml VOA Vial
(B) Glass Liter
(C) Plastic 500-ml
(D) Plastic Liter
(E) ~~Brass Tube~~ 250 poly
(F) Other 250 glass

SAMPLE DESCRIPTION CODES
(A) Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other _____

TAT CODES
(1.) Standard
2. 48 Hour
3. 24 Hour
4. Other _____

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. _____

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	SEE NOTE 1	SEE NOTE 2	TOC	TDS	DOC	8010/8020	HAA6	Tot Phosphates		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12/15/08	1230	MW-1	19.7	860	6.50	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							F	A				1						X					1		✓				
6							A	A			3								X				1		✓	✓			
7							B	A	1											X			1		✓				
8		↓	↓	↓	↓	↓	E	A				1									X		1		✓				
9		1115	MW-2	19.5	7.10	6.84	D	A	1					X									1		✓				
10							C	A		1					X								1		✓				
11							F	A				1				X							1		✓				
12							E	A	1								X						1		✓				
13							F	A				1						X					1		✓				
14							A	A			3								X				1		✓	✓			
15							B	A	1											X			1		✓				
16	↓	↓	↓	↓	↓	↓	E	A				1									X		1		✓				

NOTES / MISCELLANEOUS
1. ALKALINITY/SULFATE/NITRATE/NITRITE/CHLORIDE/BROMIDE
2. BORON/CALCIUM/MAGNESIUM/SODIUM/POTASIUM

Field / Container Temp. 4 °C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14-397,398,399,400,401	Thomas Murphy	12/15/08	1500		12/15/08	1600

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER _____ TEL _____ FAX _____

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14397

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

SAMPLERS Castro / Murphy (PRINT)

(SIGN)

RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE			Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION				Field Filtered (check)	ANALYSIS REQUESTED									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
				TEMP °C	COND micromhos/cm	pH			Unpreserved	HNO_3	HCL	NaOH		Surfactants	Cyanide														
1	12/15/08	1230	MW-1	19.7	540	6.50	D	A	1					X									1		✓				
2		1115	MW-2	19.3	710	6.84	D	A	1					X									1		✓				
3		845	MW-3	17.1	909	6.86	D	A	1					X									1		✓				
4		940	MW-4	18.1	946	6.87	D	A	1					X									1		✓				
5		900	L-5 COMP	12.4	2146	7.66	D	A	1					X									1		✓				
6		1000	L-10 COMP	13.6	1655	7.84	D	A	1					X									1		✓				
7		1000	SOURCE	10.9	1156	7.65	D	A	1					X									1		✓				
8		—	4876	—	—	—	D	A	1					X									1		✓				
9		—	4877	—	—	—	D	H	1					X									1		✓				
10		1000	Source	10.9	1156	7.65	C	A				1			X								1						
11		—	4876	—		—	C	A				1			X								1						
12		—	4877	—	—	—	C	H				1			X								1						
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14-396,398,399,400,401	Murphy	12/15/08	1500		12/15/08	1500

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY: PAGE 2 OF 2

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

LOGIN COMMENTS: ____________

SAMPLES CHECKED AGAINST COC BY: ____________

SAMPLES LOGGED IN BY: ____________

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 6° or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: LOCUS TECHNOLOGIES

SYSTEM #:

COMPLIANCE SAMPLES ☐ - Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: LOCUS

P.O.# / JOB # / PROJECT: 27011-07-4200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☑ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE: T. Murphy MURPHY

TAT requested: rush by adv notice only
STD ✓ 1 week __ 3 day __ 2 day __ 1 day __

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP																SAMPLER COMMENTS
12/15/08		MW-1	MW-1	RGW	X																	
		MW-2	MW-2	RGW	X																	
		MW-3	MW-3	RGW	X																	
		MW-4	MW-4	RGW	X																	
		SOURCE	SOURCE	FW	X																	
		4876	4876	FW	X																	
		4877	4877	FW	X																	

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Tom Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	12/15/08	
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY:

LOGIN COMMENTS: ______________________

SAMPLES CHECKED AGAINST COC BY: ______

SAMPLES LOGGED IN BY: ______

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 6°C or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___ *(check for yes)*

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: LOCUS TECHNOLOGIES

SYSTEM #:

COMPLIANCE SAMPLES ☐ - Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: LOCUS

P.O.# / JOB # / PROJECT: 27011-07-4200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☑ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE: MURPHY Murphy

TAT requested: rush by adv notice only
STD ✓ 1 week ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	SAMPLER COMMENTS
12/15/08		L-5 COMP		RW		X	
		L-10 COMP		RW		X	

*** MATRIX TYPES:**

RSW = Raw Surface Water	CFW = Chlor(am)inated Finished Water	CWW = Chlorinated Waste Water	BW = Bottled Water	SO = Soil
RGW = Raw Ground Water	FW = Other Finished Water	WW = Other Waste Water	SW = Storm Water	SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	12/15/08	
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

CHAIN OF COUSTODY

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EMLab P&K

Cherry Hill, NJ: 1936 Olney Avenue, Cherry Hill, NJ 08003 • (866) 871-1984
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 • (800) 651-4802
San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 • (866) 888-6653

LEVEL	WEATHER	Fog	Rain	Snow	Wind	Clear
	None					
	Light					
	Moderate					
	Heavy					

CONTACT INFORMATION

Company: LOCUS TECHNOLOGIES
Contact: NORMAN WONG
Phone: 650-960-1640
Address: 299 FAIRCHILD DR, MOUNTAIN VIEW, CA 94043
Special Instructions:

PROJECT INFORMATION

Project ID: 27011-07-4200
Project Desc.: Recycled Water Study
Project Zip Code:
Sampling Date & Time: 12/15/08
PO Number:

TURN AROUND TIME CODES - (TAT)

STD - Standard (DEFAULT)
ND - Next Business Day
SD - Same Business Day Rush
WH - Weekend/Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

SAMPLE ID	DESCRIPTION	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	NOTES (Time of day, Temp, RH, etc.)
MW-1		W	STD	1L	
MW-2		W		1L	
MW-3		W		1L	
MW-4		W		1L	
L5 COMP		W		150ml (min)	
L10 COMP		W		150ml (min)	
Source		W		1L	
4877		W		1L	
4876		W	STD	1L	

REQUESTED SERVICES (✓ Boxes)

	Non-Culturable: Spore Trap		Non-Culturable: Tape Swab Bulk		Culturable: BioCassette™ Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plate										Other Requests					
SAMPLE ID	Fungi - Spore Trap Analysis	Spore Trap Analysis - Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + Asp. spp)	2-Media Surface Fungi (Genus ID + Asp. spp.)	3-Media Surface Fungi (Genus ID + Asp. spp.)	Culturable Air Fungi (Genus ID + Asp. spp.)	Gram Stain and Counts (Culturable Air and Surface Bacteria)	*Legionella* culture	Total Coliform, *E.coli* (Presence/Absence)	Membrane Filtration (Please specify organism)	MPN Bacteria (Please specify organism) Total/Fecal Coliforms	QuantiTray - Sewage Screen	Asbestos Analysis - PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis - PLM (EPA method 600/R-93-116)	PCR (please specify test)	HPC	MPN Bacteria - E. Coli	
MW-1													X					X	X	
MW-2													X					X	X	
MW-3													X					X	X	
MW-4													X					X	X	
L5 COMP													X					X	X	
L10 COMP													X					X	X	
Source													X					X	X	
4877													X					X	X	
4876													X					X	X	

SAMPLE TYPE CODES

BC - BioCassette™
A1S - Andersen
SAS - Surface Air Sampler
O - Other:
CP - Contact Plate
ST - Spore Trap: Zefon, Allergenco, Burkard...
T - Tape
SW - Swab
B - Bulk
D - Dust
W - Water
SO - Soil

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
Norman Wong	12/15/08 14:30	Megan Tran	12/15/08 1430

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html

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LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD/IDT
Field Activity: Well Sampling
Weather: cold/raining

Project No.: 27011-07-4200
Date: 12-15-08
Logged by: H. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
700	Prepped & loaded truck.
800	Arrived onsite. Checked in at main lobby. Calibrated ultrameter #312.
815	AT MW-3. Take DO reading
845	Sampled MW-3.
910	AT MW-4. Take DO reading.
940	Sampled MW-4.
1025	AT MW-2. Take DO reading.
1115	Sampled MW-2.
1145	AT MW-1. Take DO reading.
1230	Sampled MW-1.
1300	Offloaded water into field.
1320	Left site for office
1340	Arrived at office to store & pack samples & fill out COC's.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW-1
DATE 12/15/2008
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS cold/rainy
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ____ YES ____ NO ____ pH meter: ____ FLOW RATE: ____
PUMP CYCLING ____ YES ____ NO ____ METER READING ____

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 32.50 TIME 1150 W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH 46.5
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 46.5-32.50=14×1.96=27.44 gal
TIME PURGE BEGINS 1155
ACTUAL AMOUNT PURGED 36.19 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1227	19.6	859	6.78	Cloudy brown/no odor	130	1.39 mg/L
1228	19.7	860	6.80	" " " "	131	14.7%
1229	19.7	860	6.80	" " " "	130	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-1 w/sample port
SAMPLING TIME 1230
DATE 12-15-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1 HOSE REEL -------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-2
PREVIOUSLY USED IN WELL ____
SITE IDT
SITE ____
DECON METHOD/STEAM TIME ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO ID ____
RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK X YES ____ NO ID 4877 QA/QC SPIKE ____ YES X NO ID -------
DUPLICATE X YES ____ NO ID 4876 FIELD BLANK ____ YES X NO ID ------ INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 2.10 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW-2
DATE 12/15/2008
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Cool/rainy
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ____ YES ____ NO ____ pH meter: ____ FLOW RATE: ____
PUMP CYCLING ____ YES ____ NO ____ METER READING ____

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 31,33 TIME 1030 W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-31,33=13.67x1,96=26,79gal
TIME PURGE BEGINS 1040
ACTUAL AMOUNT PURGED 35.17gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1112	19.2	709	6.84	Silty cloudy/no odor	110	7.22%
1113	19.3	710	6.84	" " " "	111	0.70mg/L
1114	19.3	711	6.85	" " " "	111	

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-1 w/sample port
SAMPLING TIME 1115
DATE 12-15-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1 HOSE REEL --------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-4
PREVIOUSLY USED IN WELL ____
SITE IDT
SITE ____
DECON METHOD/STEAM TIME ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO I D ____
RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK X YES ____ NO ID 4877 QA/QC SPIKE ____ YES X NO ID -------
DUPLICATE X YES ____ NO ID 4876 FIELD BLANK ____ YES X NO ID ------ INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 2.20+mg/L / Silty

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 3
DATE 12/15/2008
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS cool / wet
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ____ YES ____ NO ____ pH meter: ____ FLOW RATE: ____
PUMP CYCLING ____ YES ____ NO ____ METER READING: ____

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 32.55 TIME 820 W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL -------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-32.55=12.45 x 1.96 = 24.40 gal.
TIME PURGE BEGINS 825
ACTUAL AMOUNT PURGED 31.67 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
842	17.0	910	6.84	cloudy/no odor	142	8.92
843	17.1	909	6.86	" " "	144	0.80 mg/L
844	17.1	909	6.87	" " "	142	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-1 w/Sample port
SAMPLING TIME 845
DATE 12-15-08

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1 HOSE REEL ------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL S065B1 PREVIOUSLY USED IN WELL ____
SITE Arques SITE ____
DECON METHOD/STEAM TIME Steam w/ liq 30min DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO I D ____ RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK X YES ____ NO ID 4877 QA/QC SPIKE ____ YES X NO ID -------
DUPLICATE X YES ____ NO ID 4876 FIELD BLANK ____ YES X NO ID ------- INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 0.26 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: **IDT**
WELL\SAMPLE DESIGNATION **MW-** 4
DATE 12/15/2008
SAMPLE SOURCE **A**
PROJECT# **27011-07-4200**
AMBIENT CONDITIONS cool/rainy
SAMPLER **H.CASTRO/ T.Murphy**

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ____ YES ____ NO ____ pH meter: ____ FLOW RATE: ____
PUMP CYCLING ____ YES ____ NO ____ METER READING ____

WATER LEVEL INFORMATION MEASURING POINT **TOC** INSTRUMENT USED **SJ-1**

W.L. BEFORE PURGE 35.64 TIME 910 W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** **C**

PURGE DEVICE I.D. **GRUND-1**
WELL DEPTH 45'
DIAMETER **4"**
#CASING VOLUMES (PROTOCOL) **3**
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-3564=9.36x1.96=18.34 gal
TIME PURGE BEGINS 915
ACTUAL AMOUNT PURGED 25,5 gal
pH INSTRUMENT **ULTRA#312**

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
937	18.1	944	6,86	cloudy/no odor	88	6.39
938	18.1	946	6.87	" " "	89	0.57mg/L
939	18.1	946	6.88	" " "	89	

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** **D**

APPROXIMATE DEPTH OF GRAB **N/A**
SAMPLING DEVICE ID **GRUND-1** w/sample port SAMPLING TIME 940
DATE **12-15-08**

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID **GRUND-1** HOSE REEL -------- SAMPLING DEVICE ID **SAMPLE PORT**
PREVIOUSLY USED IN WELL MW-3 PREVIOUSLY USED IN WELL ____
SITE IDT SITE ____
DECON METHOD/STEAM TIME ____ DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO ID ____ RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK X YES ____ NO ID 4877 QA/QC SPIKE ____ YES **X** NO ID ------
DUPLICATE X YES ____ NO ID 4876 FIELD BLANK ____ YES **X** NO ID ------ INTER-LAB SPLIT ____ YES **X** NO ID ----

NOTES

CHLORINE: 1.14 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: **IDT**
DATE 12/15/2008
PROJECT# **27011-07-4200**
SAMPLER **H.CASTRO/ T.Murphy**

WELL\SAMPLE DESIGNATION ~~MW-~~ L-5 COMP
SAMPLE SOURCE **A**
AMBIENT CONDITIONS RAIN/CLOUDY/COLD

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ___ YES ___ NO ___ pH meter: ____ FLOW RATE: ____
PUMP CYCLING ___ YES ___ NO ___ METER READING: ____

WATER LEVEL INFORMATION MEASURING POINT **TOC** INSTRUMENT USED **SJ-1**

W.L. BEFORE PURGE N/A TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD C**

PURGE DEVICE I.D. **GRUND-1**
WELL DEPTH N/A DIAMETER **4"** #CASING VOLUMES (PROTOCOL) **3**
SCREENED INTERVAL ------ PUMP SETTING ____
PURGE VOLUME CALCULATION ____
TIME PURGE BEGINS ____ ACTUAL AMOUNT PURGED ____ pH INSTRUMENT **ULTRA#~~342~~** 309

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
	12.4	2146	7.66	SLIGHT BROWN/NO ODOR	148	82.6 % 10.10 mg/L

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD D**

APPROXIMATE DEPTH OF GRAB **N/A**
SAMPLING DEVICE ID ~~GRUND-1~~ SAMPLING TIME COMP DATE **12-15-08**

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID **GRUND-1** HOSE REEL ------ SAMPLING DEVICE ID **SAMPLE PORT**
PREVIOUSLY USED IN WELL N/A PREVIOUSLY USED IN WELL ____
SITE ____ SITE ____
DECON METHOD/STEAM TIME ____ DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ___ YES ___ NO I D ____ RINSEATE SAMPLE ___ YES ___ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK X YES ___ NO ID 4877 QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE X YES ___ NO ID 4876 FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.42 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: **IDT**
WELL\SAMPLE DESIGNATION ~~MW-~~ L-10 COMP
DATE 12/15/2008
SAMPLE SOURCE A
PROJECT# **27011-07-4200**
AMBIENT CONDITIONS RAIN/CLOUDY/COLD
SAMPLER **H.CASTRO/ T.Murphy**

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter: ___
METER READING ___
FLOW RATE: ___

WATER LEVEL INFORMATION

MEASURING POINT **TOC**
INSTRUMENT USED **SJ-1**

W.L. BEFORE PURGE N/A
TIME ___
W.L. AFTER PURGE ___
TIME ___
W.L. FOR 80% RECOVERY ___
W.L. TIME OF SAMPLE ___
DATE ___
TIME ___

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. **GRUND-1**
WELL DEPTH N/A
DIAMETER **4"**
#CASING VOLUMES (PROTOCOL) **3**
SCREENED INTERVAL **------**
PUMP SETTING ___
PURGE VOLUME CALCULATION ___
TIME PURGE BEGINS ___
ACTUAL AMOUNT PURGED ___
pH INSTRUMENT **ULTRA#~~342~~** 309

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
	13.6	1655	7.84	Slight Brown/NO ODOR	101	77.9%
						8.37 mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB **N/A**
SAMPLING DEVICE ID ~~**GRUND-1**~~
SAMPLING TIME COMP
DATE **12-15-08**

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID **GRUND-1**
HOSE REEL **-------**
SAMPLING DEVICE ID **SAMPLE PORT**
PREVIOUSLY USED IN WELL N/A
PREVIOUSLY USED IN WELL ___
SITE ___
SITE ___
DECON METHOD/STEAM TIME ___
DECON METHOD/STEAM TIME ___
RINSEATE SAMPLE ___ YES ___ NO ID ___
RINSEATE SAMPLE ___ YES ___ NO ID ___

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK X YES ___ NO ID 4877 QA/QC SPIKE ___ YES X NO ID -------
DUPLICATE X YES ___ NO ID 4876 FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: .21 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION ~~MW~~ SOURCE
SAMPLE SOURCE A
AMBIENT CONDITIONS RAIN/COLD
SITE: **IDT**
DATE 12/15/2008
PROJECT# **27011-07-4200**
SAMPLER **H.CASTRO/ T.Murphy**

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter:
METER READING
FLOW RATE:

WATER LEVEL INFORMATION

MEASURING POINT **TOC**
INSTRUMENT USED **SJ-1**

W.L. BEFORE PURGE N/A
TIME
W.L. AFTER PURGE
TIME
W.L. FOR 80% RECOVERY
W.L. TIME OF SAMPLE
DATE
TIME

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD **C**

PURGE DEVICE I.D. **GRUND-1**
WELL DEPTH N/A
DIAMETER **4"**
#CASING VOLUMES (PROTOCOL) **3**
SCREENED INTERVAL ~~-----~~
PUMP SETTING
PURGE VOLUME CALCULATION
TIME PURGE BEGINS
ACTUAL AMOUNT PURGED
pH INSTRUMENT **ULTRA#~~342~~** 309

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO %
1020	11.0	1158	9.58	CLEAR/NO ODOR	130	57.3%
1021	10.9	1156	7.65	CLEAR/NO ODOR	126	6.28 mg/L
1022	10.8	1156	7.63	CLEAR/NO ODOR	123	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD **D**

APPROXIMATE DEPTH OF GRAB **N/A**
SAMPLING DEVICE ID ~~GRUND-1~~ GRAB
SAMPLING TIME 1000
DATE **12-15-08**

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID **GRUND-1**
HOSE REEL -------
SAMPLING DEVICE ID **SAMPLE PORT**
PREVIOUSLY USED IN WELL N/A
PREVIOUSLY USED IN WELL
SITE
SITE
DECON METHOD/STEAM TIME
DECON METHOD/STEAM TIME
RINSEATE SAMPLE ___ YES ___ NO I D
RINSEATE SAMPLE ___ YES ___ NO ID

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK X YES ___ NO ID 4877 QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE X YES ___ NO ID 4876 FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.10 mg/L DUP/FB TAKEN

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
PO #: 27011-07-4200
Group #: 302317
Project #: RECYCLED-WATER-STUDY
Project Manager: Richard C Zimmer
Phone: 626-386-1157

The following samples were received from you on **December 16, 2008** They have been scheduled for the tests listed below each sample If this information is incorrect, please contact your service representative Thank you for using MWH Laboratories.

Sample #	Sample Id		Matrix	Sample Date
200812170019	MW-1		Water	15-Dec-2008 0000
	@NDMA	@PFC	EDTA by Ion Chrom-Subcontract	
200812170020	MW-2		Water	15-Dec-2008 0000
	@NDMA	@PFC	EDTA by Ion Chrom-Subcontract	
200812170021	MW-3		Water	15-Dec-2008 0000
	@NDMA	@PFC	EDTA by Ion Chrom-Subcontract	
200812170022	MW-4		Water	15-Dec-2008 0000
	@NDMA	@PFC	EDTA by Ion Chrom-Subcontract	
200812170023	Source		Water	15-Dec-2008 0000
	@525PLUS	@NDMA	@PFC	
	EDTA by Ion Chrom-Subcontract			
200812170024	4876		Water	15-Dec-2008 0000
	@525PLUS	@NDMA	@PFC	
	EDTA by Ion Chrom-Subcontract			
200812170025	4877		Water	15-Dec-2008 0000
	@525PLUS	@NDMA	@PFC	
	EDTA by Ion Chrom-Subcontract			
200812170026	L-5 Comp		Water	15-Dec-2008 0000
	@PFC	EDTA by Ion Chrom-Subcontract		
200812170027	L-10 Comp		Water	15-Dec-2008 0000
	@PFC	EDTA by Ion Chrom-Subcontract		

Test Description

@525PLUS -- Semivolatiles by GCMS
@NDMA -- Nitrosamines by CLLE
@PFC -- Perfluorinated compounds

Reported: 12/18/08

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14378

PROJECT NAME SCVWD RECLAIMED WATER
PROJECT NUMBER 87011-07-4200
RECORDER T. Murphy (SIGN)
SAMPLERS T. MURPHY (PRINT)
T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
B. Glass Liter
[✓ C.] Plastic 500 ml
D. Plastic Liter
E. Brass Tube
F. Other ________

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB ACCUTEST

LABORATORY USE ONLY
LAB PROJECT NO. ________

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED													LABORATORY USE ONLY		
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL		Field Filtered (check)	BROMIDE									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	11/24/08	1000	L5 COMP	—	—	—	C	A	1					X									1						
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy		11/24/08	10:29

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
DELIVERED	COOLER	NONE	Thomas Murphy	11/24/08	1025			

Send Lab Results to (Name): WES HAWTHORNE CC NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______________________ TEL __________ FAX __________

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14408

PROJECT NAME Reclaimed Water Study

PROJECT NUMBER 27011-07-42001

RECORDER T. Murphy (SIGN)

SAMPLERS CASTRO/MURPHY (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES

- A. 40-ml VOA Vial
- B. Glass Liter
- C. Plastic 500-ml
- [✓ D.] Plastic ~~Liter~~ 250
- E. Brass Tube
- F. Other

SAMPLE DESCRIPTION CODES

- [✓ A.] Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other

TAT CODES

- [✓ 1.] Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO3	HCL		Field Filtered (check)	ANALYSIS REQUESTED: BROMIDE									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1/5/09	1130	08502E08D12				D	A	1					X									1		✓				
2	|	1045	08502E08D11				D	A	1					X									1		✓				
3	|	1105	08502E07A014				D	A	1					X									1		✓				
4	|	1020	08502E07A015				D	A	1					X									1		✓				
5	|	COMP	L-5 COMP				D	A	1					X									1		✓				
6	|	COMP	L-10 COMP				D	A	1					X									1		✓				
7	|	1140	SOURCE				D	A	1					X									1		✓				
8	|	—	4885				D	A	1					X									1		✓				
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy		1/5/2009	12:16

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	None	Thomas Murphy	1/5/09	1210			

Send Lab Results to (Name): Wes Hawthorne cc: Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739

☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101

☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14410

PROJECT NAME Reclaimed Water Study
PROJECT NUMBER 27011-07-4200
RECORDER T. Murphy (SIGN)

SAMPLERS T. MURPHY (PRINT)
T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B. Glass Liter]
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB MWH Laboratories

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO$_3$	HCL	Thio	Field Filtered (check)	ANALYSIS REQUESTED: NDMA									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1/5/09	COMP	L-5 COMP				B	A				1		X									1						
2		COMP	L-10 COMP				B	A				1		X									1						
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Commercial Courier	Cooler	None	T. Murphy	1/5/09	1400			

Send Lab Results to (Name): Wes Hawthorne cc: Norman Wong (Check Office Below)

Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD/IDT

Field Activity: Well Sampling

Weather: Cool/raining

Project No.: 27011-07-4200

Date: 1-509

Logged by: H. Castro Jr.

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
830	Prepped & loaded truck.
940	Arrived onsite. Checked in at main lobby.
1020	Sampled 08S02E07A015/MW-4. (Bromide)
1045	Sampled 08S02E08D011/MW-2. (Bromide)
1105	Sampled 08S02E07A014/MW-3. (Bromide)
1130	Sampled 08S02E08D012/MW-1. (Bromide)
1200	Assisted Tom with source sample.
1225	Checked out at main lobby & left site.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW-4 08502E07A015
SAMPLE SOURCE D
AMBIENT CONDITIONS cool/overcast
SITE: SCVWD/IDT
DATE 1-5-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO/T. Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: C
CONTINUOUS PUMPER ____YES____NO
PUMP CYCLING____YES_NO
pH meter: ULTRA#~~3~~ 312 FLOW RATE: —
METER READING —

WATER LEVEL INFORMATION MEASURING POINT INSTRUMENT USED

W.L. BEFORE PURGE TIME W.L. AFTER PURGE TIME
W.L. FOR 80% RECOVERY W.L. TIME OF SAMPLE DATE TIME

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD

PURGE DEVICE I.D.
WELL DEPTH DIAMETER #CASING VOLUMES (PROTOCOL)
SCREENED INTERVAL PUMP SETTING
PURGE VOLUME CALCULATION
TIME PURGE BEGINS ACTUAL AMOUNT PURGED pH INSTRUMENT

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	TURBIDITY
					—
					—
					—

WATER SAMPLING INFORMATION

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID Disp. Bailer SAMPLING TIME 1020 DATE 1-5-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
Poly	1	250ml	Bromide	SCVWD	None	None

DECONTAMINATION INFORMATION

PURGE DEVICE ID HOSE REEL SAMPLING DEVICE ID HOSE REEL
PREVIOUSLY USED IN WELL PREVIOUSLY USED IN WELL
SITE SITE
DECON METHOD/STEAM TIME DECON METHOD/STEAM TIME
RINSEATE SAMPLE YES NO I D RINSEATE SAMPLE YES NO ID

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK___YES [✓ NO] ID — QA/QC SPIKE_____YES____NO ID ——
DUPLICATE____YES [✓ NO] ID — FIELD BLANK____YES [✓ NO] ID — INTER-LAB SPLIT____YES___NO ID ——

NOTES

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW-2 08S02E08D011

SAMPLE SOURCE D

AMBIENT CONDITIONS cool/overcast

SITE: SCVWD/IDT

DATE 1-5-09

PROJECT# 27011-07-4200

SAMPLER H.CASTRO/T. Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: C

CONTINUOUS PUMPER ____YES_____NO

PUMP CYCLING ___YES_NO

pH meter: ULTRA#~~3~~ 512 FLOW RATE: —

METER READING —

WATER LEVEL INFORMATION MEASURING POINT INSTRUMENT USED

W.L. BEFORE PURGE TIME W.L. AFTER PURGE TIME

W.L. FOR 80% RECOVERY W.L. TIME OF SAMPLE DATE TIME

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD

PURGE DEVICE I.D.

WELL DEPTH DIAMETER #CASING VOLUMES (PROTOCOL)

SCREENED INTERVAL PUMP SETTING

PURGE VOLUME CALCULATION

TIME PURGE BEGINS ACTUAL AMOUNT PURGED pH INSTRUMENT

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	TURBIDITY
					—
					—
					—

WATER SAMPLING INFORMATION

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID Disp. Bailer SAMPLING TIME 1045 DATE 1-5-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
Poly	1	250ml	Bromide	SCVWD	None	None

DECONTAMINATION INFORMATION

PURGE DEVICE ID HOSE REEL SAMPLING DEVICE ID HOSE REEL

PREVIOUSLY USED IN WELL PREVIOUSLY USED IN WELL

SITE SITE

DECON METHOD/STEAM TIME DECON METHOD/STEAM TIME

RINSEATE SAMPLE ____ YES ____ NO I.D. RINSEATE SAMPLE ____ YES ____ NO ID

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___YES [✓ NO] ID — QA/QC SPIKE ____YES ___NO ID -----

DUPLICATE ___YES [✓ NO] ID — FIELD BLANK ___YES [✓ NO] ID — INTER-LAB SPLIT ___YES ___NO ID -----

NOTES

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW-3 08S02E07A014
SITE: SCVWD/IDT
DATE 1-5-09
SAMPLE SOURCE D
PROJECT# 27011-07-4200
AMBIENT CONDITIONS cool/overcast
SAMPLER H.CASTRO / T. Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: C
CONTINUOUS PUMPER ____YES_____NO
PUMP CYCLING ____YES_NO
pH meter: ULTRA# ~~8~~ 312 FLOW RATE: —
METER READING —

WATER LEVEL INFORMATION MEASURING POINT INSTRUMENT USED

W.L. BEFORE PURGE ______ TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD

PURGE DEVICE I.D. ______
WELL DEPTH ______ DIAMETER ______ #CASING VOLUMES (PROTOCOL) ______
SCREENED INTERVAL ______ PUMP SETTING ______
PURGE VOLUME CALCULATION ______
TIME PURGE BEGINS ______ ACTUAL AMOUNT PURGED ______ pH INSTRUMENT ______

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	TURBIDITY
					—
					—
					—

WATER SAMPLING INFORMATION

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID Disp. Bailer SAMPLING TIME 1105 DATE 1-5-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
Poly	1	250ml	Bromide	SCVWD	None	None

DECONTAMINATION INFORMATION

PURGE DEVICE ID ______ HOSE REEL ______ SAMPLING DEVICE ID ______ HOSE REEL ______
PREVIOUSLY USED IN WELL ______ PREVIOUSLY USED IN WELL ______
SITE ______ SITE ______
DECON METHOD/STEAM TIME ______ DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO ___ I.D. ______ RINSEATE SAMPLE ___ YES ___ NO ___ ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ____YES [✓ NO] ID — QA/QC SPIKE _____YES ____NO ID ----
DUPLICATE ____YES [✓ NO] ID — FIELD BLANK ____YES [✓ NO] ID — INTER-LAB SPLIT ____YES ___NO ID ----

NOTES

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW-1 08S02E08D012
SAMPLE SOURCE D
AMBIENT CONDITIONS Cool/overcast
SITE: SCVWD/IDT
DATE 1-5-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO/T. Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: C
CONTINUOUS PUMPER ____YES____NO
PUMP CYCLING ____YES_NO
pH meter: ULTRA#~~8~~ 312 FLOW RATE: —
METER READING —

WATER LEVEL INFORMATION

MEASURING POINT ______ INSTRUMENT USED ______
W.L. BEFORE PURGE ______ TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD ______
PURGE DEVICE I.D. ______
WELL DEPTH ______ DIAMETER ______ #CASING VOLUMES (PROTOCOL) ______
SCREENED INTERVAL ______ PUMP SETTING ______
PURGE VOLUME CALCULATION ______
TIME PURGE BEGINS ______ ACTUAL AMOUNT PURGED ______ pH INSTRUMENT ______

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	TURBIDITY
					—
					—
					—

WATER SAMPLING INFORMATION

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID Disp. Bailer SAMPLING TIME 1130 DATE 1-5-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
Poly	1	250mL	Bromide	SCVWD	None	None

DECONTAMINATION INFORMATION

PURGE DEVICE ID ______ HOSE REEL ______ SAMPLING DEVICE ID ______ HOSE REEL ______
PREVIOUSLY USED IN WELL ______ PREVIOUSLY USED IN WELL ______
SITE ______ SITE ______
DECON METHOD/STEAM TIME ______ DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ____YES____NO I D ______ RINSEATE SAMPLE ____YES____NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK____YES [✓ NO] ID —— QA/QC SPIKE____YES____NO ID -----
DUPLICATE____YES [✓ NO] ID —— FIELD BLANK____YES [✓ NO] ID —— INTER-LAB SPLIT____YES____NO ID -----

NOTES

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION L-5 COMP
SAMPLE SOURCE D
AMBIENT CONDITIONS Rain / Cold
SITE: SCVWD/IDT
DATE 1-5-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO / T. Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: C
CONTINUOUS PUMPER ____YES_____NO
PUMP CYCLING____YES_NO
pH meter: ULTRA# 312 FLOW RATE: —
METER READING —

WATER LEVEL INFORMATION MEASURING POINT INSTRUMENT USED

W.L. BEFORE PURGE TIME W.L. AFTER PURGE TIME
W.L. FOR 80% RECOVERY W.L. TIME OF SAMPLE DATE TIME

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD

PURGE DEVICE I.D.
WELL DEPTH DIAMETER #CASING VOLUMES (PROTOCOL)
SCREENED INTERVAL PUMP SETTING
PURGE VOLUME CALCULATION
TIME PURGE BEGINS ACTUAL AMOUNT PURGED pH INSTRUMENT

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	TURBIDITY
COMP	—	—	—	slight discolor / NO ODOR	—
					—
					—

WATER SAMPLING INFORMATION

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID ~~Disp. Bailer~~ SAMPLING TIME COMP DATE 1-5-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
POLY	1	250ml	Bromide	SCVWD	NONE	None
AMBER	1	1 liter	NDMA	MWH	thio	NONE

DECONTAMINATION INFORMATION

PURGE DEVICE ID HOSE REEL SAMPLING DEVICE ID HOSE REEL
PREVIOUSLY USED IN WELL PREVIOUSLY USED IN WELL
SITE SITE
DECON METHOD/STEAM TIME DECON METHOD/STEAM TIME
RINSEATE SAMPLE YES NO I.D. RINSEATE SAMPLE YES NO ID

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK____YES [✓ NO] ID — QA/QC SPIKE_____YES____NO ID ----
DUPLICATE____YES [✓ NO] ID — FIELD BLANK____YES [✓ NO] ID — INTER-LAB SPLIT____YES___NO ID ----

NOTES

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: SCVWD/IDT
WELL\SAMPLE DESIGNATION L10-COMP
DATE 1-5-09
SAMPLE SOURCE D
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Rain/Cold
SAMPLER H.CASTRO/T. Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: C
CONTINUOUS PUMPER ____YES_____NO
PUMP CYCLING ____YES_NO
pH meter: ULTRA#~~9~~ 312
FLOW RATE: —
METER READING —

WATER LEVEL INFORMATION   MEASURING POINT   INSTRUMENT USED

W.L. BEFORE PURGE ______ TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION   MONITORING WELL PURGE METHOD

PURGE DEVICE I.D ______
WELL DEPTH ______ DIAMETER ______ #CASING VOLUMES (PROTOCOL) ______
SCREENED INTERVAL ______ PUMP SETTING ______
PURGE VOLUME CALCULATION ______
TIME PURGE BEGINS ______ ACTUAL AMOUNT PURGED ______ pH INSTRUMENT ______

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	TURBIDITY
COMP	—	—	—	slight discolor/No ODOR	—
					—
					—

WATER SAMPLING INFORMATION

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID Disp. Bailer   SAMPLING TIME COMP   DATE 1-5-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
Poly	1	250ml	Bromide	SCVWD	NO	None
Amber	1	1liter	NDMA	MWH	NO	NO

DECONTAMINATION INFORMATION

PURGE DEVICE ID ______ HOSE REEL ______ SAMPLING DEVICE ID ______ HOSE REEL ______
PREVIOUSLY USED IN WELL ______ PREVIOUSLY USED IN WELL ______
SITE ______ SITE ______
DECON METHOD/STEAM TIME ______ DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ____YES____NO I.D ______ RINSEATE SAMPLE ____YES____NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___YES [✓ NO] ID — QA/QC SPIKE ____YES ___NO ID ---
DUPLICATE ___YES [✓ NO] ID — FIELD BLANK ___YES [✓ NO] ID — INTER-LAB SPLIT ____YES___NO ID ---

NOTES

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION SOURCE
SAMPLE SOURCE D
AMBIENT CONDITIONS Rain/Cold

SITE: SCVWD/IDT
DATE 1-5-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO / T. Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: C
CONTINUOUS PUMPER ____YES_____NO
PUMP CYCLING____YES_NO
pH meter: ULTRA#~~3~~ 312 FLOW RATE: —
METER READING —

WATER LEVEL INFORMATION MEASURING POINT INSTRUMENT USED

W.L. BEFORE PURGE________TIME____ W.L. AFTER PURGE________ TIME________
W.L. FOR 80% RECOVERY________ W.L. TIME OF SAMPLE________ DATE________ TIME________

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD

PURGE DEVICE I.D________
WELL DEPTH________ DIAMETER________ #CASING VOLUMES (PROTOCOL)________
SCREENED INTERVAL________ PUMP SETTING________
PURGE VOLUME CALCULATION________
TIME PURGE BEGINS________ ACTUAL AMOUNT PURGED________ pH INSTRUMENT________

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	TURBIDITY
1140	—	—	—	clear / NO ODOR	—
					—
					—

WATER SAMPLING INFORMATION

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID Disp. Bailer SAMPLING TIME 1140 DATE 1-5-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
poly	1	250ml	BROMIDE	SCVWD	NO	None

DECONTAMINATION INFORMATION

PURGE DEVICE ID________ HOSE REEL________ SAMPLING DEVICE ID________ HOSE REEL________
PREVIOUSLY USED IN WELL________ PREVIOUSLY USED IN WELL________
SITE________ SITE________
DECON METHOD/STEAM TIME________ DECON METHOD/STEAM TIME________
RINSEATE SAMPLE____YES____NO____I.D________ RINSEATE SAMPLE____YES____NO____ID________

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___YES X NO ID — QA/QC SPIKE_____YES____NO ID —
DUPLICATE ✓ YES ~~X~~ NO ID 4885 FIELD BLANK____YES X NO ID — INTER-LAB SPLIT____YES___NO ID —

NOTES

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
PO #:
Group #: 302546
Project #: RECYCLED-WATER-STUDY
Project Manager: Richard C Zimmer
Phone: 626-386-1157

The following samples were received from you on **January 06, 2009** They have been scheduled for the tests listed below each sample If this information is incorrect, please contact your service representative Thank you for using MWH Laboratories.

Sample #	Sample Id	Matrix	Sample Date
200901060008	L-5 COMP @NDMA	Water	05-Jan-2009 0000
200901060009	L-10 COMP @NDMA	Water	05-Jan-2009 0000

Test Description

@NDMA -- Nitrosamines by CLLE

Reported: 01/06/09

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14418

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

SAMPLERS Castro/Murphy (PRINT)

(SIGN)

RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E. ~~Brass Tube~~ 250 poly]
F. Other 500ml glass

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO$_3$	HCL	H2SO4	Field Filtered (check)	ANALYSIS REQUESTED: See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6	Total Phosphates	~~Surfactants~~	~~Cyanide~~	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	2-2-09	1155	MW-1	19.5	866	6.87	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							A	A			3							X					1		✓	✓			
6							B	A	1										X				1		✓				
7							E	A				1								X			1		✓				
8		↓	↓	↓	↓	↓	~~D~~	~~A~~	~~1~~														1		✓				
9		1025	MW-2	19.1	800	7.02	D	A	1					X									1		✓				
10							C	A		1					X								1		✓				
11							F	A				1				X							1		✓				
12							E	A	1								X						1		✓				
13							A	A			3							X					1		✓	✓			
14							B	A	1										X				1		✓				
15							E	A				1								X			1		✓				
16	↓	↓	↓	↓	↓	↓	~~D~~	~~A~~	~~1~~														1		✓				

NOTES / MISCELLANEOUS

Field / Container Temp. 4 °C

1. Alkalinity/Sulfate/Nitrite/Nitrate/Chloride.

2. Boron/Calcium/Magnesium/Sodium/Potasium.

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-19, 20, 21	Thomas Murphy	2/2/09	1435		2/2/09	1435

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14419

PROJECT NAME Recycled Water Study
SAMPLERS Castro / Murphy (PRINT)
PROJECT NUMBER 27011-07-4200
(SIGN)
RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- (A.) 40-ml VOA Vial
- (B.) Glass Liter
- (C.) Plastic 500-ml
- (D.) Plastic Liter
- (E.) ~~Brass Tube~~ 250 poly
- (F.) Other 500ml Glass

SAMPLE DESCRIPTION CODES
- (A.) Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other

TAT CODES
- (1.) Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO3	HCL	H2SO4	Field Filtered (check)	See Note 1	See Note 2	TOC/DOC	TDS	8010/8020	HAA6	Total Phosphate	~~Surfactants~~		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	2-2-09	835	MW-3	17.1	919	6.80	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8	↓						~~D~~	~~A~~	~~1~~												~~X~~		1		✓				
9	↓	935	MW-4	18.0	939	6.90	D	A	1					X									1		✓				
10	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
11	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
12	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
13	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
14	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
15	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
16	↓	↓	↓	↓	↓	↓	~~D~~	~~A~~	~~1~~												~~X~~		1		✓				

NOTES / MISCELLANEOUS

1. Alkalinity/Sulfate/Nitrite/Nitrate/Chloride.
2. Boron/Calcium/Magnesium/Sodium/Potasium.

Field / Container Temp. 4°c

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-18, 20, 21	Thomas Murphy	2/2/09	1435		2/2/09	1435

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ___ TEL ___ FAX ___

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14420

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ______ (SIGN)

SAMPLERS Castro / Murphy (PRINT)
______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES glass
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter 250 Amber
[✓ C.] Plastic 500-ml
D. Plastic Liter
[✓ E.] ~~Brass Tube~~
[✓ F.] Other 250 Poly

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	See note 1	See note 2	TOC ~~8015~~	TDS	8010/8020	HAAs	Total Phosphate	~~Surfactants~~	DOC	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	2-2-09	comp	L-5 COMP	11.5	2023	7.24	C	A	1					X									1		✓				
2							F	A		1					X								1		✓				
3							A	A				1				X							1		✓	✓			
4							F	A	1								X						1		✓				
5							A	A			2							X					1		✓	✓			
6							[illegible]	~~A~~											~~X~~				[illegible]		[illegible]				
7							[illegible]	[illegible]				[illegible]								~~X~~			[illegible]		[illegible]				
8			↓	↓	↓	↓	A	A				1									~~X~~	X	1		✓	✓			
9			L-10 COMP	13.5	1604	6.84	C	A	1					X									1		✓				
10							F	A		1					X								1		✓	✓			
11							A	A				1				X							1		✓				
12							F	A	1								X						1		✓				
13							A	A			2							X					1		✓	✓			
14							E	A	1										X				1		✓				
15							F	A				1								X			1		✓				
16	↓	↓	↓	↓	↓	↓	A	A				1									~~X~~	X	1		✓	✓			

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-18, 19, 21		2/2/09	1435		2/2/09	1435

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14421

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

SAMPLERS Henry Costa Sr (PRINT)

(SIGN)

RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E. ~~Brass Tube~~ 250 poly]
[✓ F. Other 250 glass]

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H. Blank/Spike]
I. Other

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HN0$_3$	HCL	H2SO4	Field Filtered (check) NaOH	ANALYSIS REQUESTED: See note 1	See note 2	TOC, DOC	TDS	8010/8020	HAAs	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	2-2-09	1045	Source	14.7	1249	6.81	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8	↓	↓	↓	↓	↓	↓	D	A	1												X		1		✓				
9	↓	↓	↓	↓	↓	↓	C	A					1									X	1		✓				
10	↓	—	4893	—	—	—	A	H			3							X					1		✓	✓	ON HOLD		
11		—	Temp Blank	—	—	—	E	H	1															*	✓	NA	*		
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.

2. Boron, Calcium, Magnesium, Sodium, Potassium.

* temp to be measured & Rec. upon reciept of samples at lab

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-18, 19, 20	Thomas Murphy	2/2/09	1435		2/2/09	1435

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14422

PROJECT NAME Reclaimed Water Study

PROJECT NUMBER 27011-07-4200

SAMPLERS Castro / Murphy (PRINT)

(SIGN)

RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D.] Plastic ~~Liter~~ 250
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO.

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO₃	HCL		Field Filtered (check)	ANALYSIS REQUESTED Bromide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
✓	1	2-2-09	1155	08502E08D12	19.5	866	6.87	D	A	1					X	1		✓				
✓	2	|	1025	08502E08D11	19.1	707	6.80	D	A	1					X	1		✓				
✓	3	|	835	08502E07A014	17.1	919	6.80	D	A	1					X	1		✓				
✓	4	|	935	08502E07A015	18.0	939	6.90	D	A	1					X	1		✓				
	5	~~|~~		~~L-5 Comp~~				~~D~~	~~A~~	~~1~~					~~X~~	~~1~~		~~✓~~				
✓	6	|	COMP	L-10 Comp				D	A	1					X	1		✓		Limited volume &		
✓	7		1045	SOURCE	19.7	1249	6.81	D	A	1					X	1		✓				
	8																					
	9																					
	10																					
	11																					
	12																					
	13																					
	14																					
	15																					
	16																					

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

rec'd 3°C GG

Container Sealed with Custody Seal: Yes ☒ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Thomas Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	None	Thomas Murphy	2/2/09	11:45		2-2-09	11:45

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739

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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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CHAIN OF CUSTODY

www.EMLabPK.com

EMLab P&K

Cherry Hill, NJ: 1936 Olney Avenue, Cherry Hill, NJ 08003 * **(866) 871-1984**
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * **(866) 888-6653**

WEATHER		Fog	Rain	Snow	Wind	Clear
LEVEL	None					
	Light					
	Moderate					
	Heavy					

CONTACT INFORMATION

Company: Locus Technologies
Contact: Norman Wong
Phone: 650-960-1640
Address: 299 Fairchild Dr. M.V. Ca. 94043
Special Instructions:

PROJECT INFORMATION

Project ID: 27011-07-4200
Project Desc.: Recycled Water Study
Project Zip Code:
Sampling Date & Time: 2-2-09
PO Number:

TURN AROUND TIME CODES - (TAT)

STD - Standard (DEFAULT)
ND - Next Business Day
SD - Same Business Day Rush
WH - Weekend/Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

SAMPLE ID	DESCRIPTION	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	NOTES (Time of day, Temp, RH, etc.)
MW-1		W	STD	1L	
MW-2		W		1L	
MW-3		W		1L	
MW-4		W		1L	
L5 Comp		W		150ml (min)	
L10 Comp		W		150ml (min)	
Source		W		1L	

REQUESTED SERVICES (✔ Boxes)

SAMPLE ID	Non-Culturable: Spore Trap: Fungi - Spore Trap Analysis	Spore Trap Analysis - Other particles	Tape Swab Bulk: Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	Culturable (BioCassette™ Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plate): 1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain and Counts (Culturable Air and Surface Bacteria)	*Legionella* culture	Total Coliform, *E.coli* (Presence/Absence)	Membrane Filtration (Please specify organism)	MPN Bacteria (Please specify organism) Fecal Coliforms	QuantiTray - Sewage Screen	Other Requests: Asbestos Analysis - PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis - PLM (EPA method 600/R-93-116)	PCR (please specify test)	HPC	MPN Bacteria - E. Coli
MW-1													X					X	X
MW-2													X					X	X
MW-3													X					X	X
MW-4													X					X	X
L5 Comp													X					X	X
L10 Comp													X					X	X
Source													X					X	X

SAMPLE TYPE CODES

BC - BioCassette™
A1S - Andersen
SAS - Surface Air Sampler
O - Other:
CP - Contact Plate
ST - Spore Trap: Zefon, Allergenco, Burkard...
T - Tape
SW - Swab
B - Bulk
D - Dust
W - Water
SO - Soil

RELINQUISHED BY	DATE & TIME
X	2-2-09 1210

RECEIVED BY	DATE & TIME
X	2/2/09 1210

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html

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v report MWH# 303170 inv# L0003006 vedd

MWH Laboratories
A Division of MWH Americas, Inc.

CHAIN OF CUSTODY RECORD

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: ______

SAMPLES LOGGED IN BY: ______

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ **PARTIALLY FROZEN** ___ **THAWED** ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: LOCUS TECHNOLOGIES

SYSTEM #:

COMPLIANCE SAMPLES ☐ - Requires state forms ☐ *(check for yes)*

NON-COMPLIANCE SAMPLES ☐ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: LOCUS

P.O.# / PROJECT JOB #: 2011-07-7000

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE:

TAT requested: rush by adv notice only
STD ✓ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA	PFC'S	EDTA	EPA535+												SAMPLER COMMENTS
2/2/07	COMP	L5 COMP		RGW		X	0	1	0	0												
|	COMP	L10 COMP		RGW		X	1	1	0	0												
|	1155	MW1		RGW	X		2	1	0	0												
|	1025	MW2		RGW	X		2	1	0	0												
|	835	MW3		RGW	X		2	1	0	0												
|	935	MW4		RGW	X		2	1	0	0												
|	1045	SOURCE		RGW	X		2	1	1	1												

*** MATRIX TYPES:**

RSW = Raw Surface Water	CFW = Chlor(am)inated Finished Water	CWW = Chlorinated Waste Water	BW = Bottled Water	SO = Soil
RGW = Raw Ground Water	FW = Other Finished Water	WW = Other Waste Water	SW = Storm Water	SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	2/3/07	1400
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

LOCUS
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD/IDT
Field Activity: Well Sampling
Weather: Clear

Project No.: 27011-07-4200
Date: 2-2-09
Logged by: A. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
645	Loaded truck, purge equipment & coolers.
745	Arrived onsite, checked in at lobby. Calibrated meter #312.
800	AT MW-3. Take DO Reading & Water level.
835	Sampled MW-3.
855	AT MW-4. Take DO Reading & Water level.
935	Sampled MW-4.
950	AT MW-2. Take DO Reading & Water level.
1025	Sampled MW-2.
1110	AT MW-1. Take DO Reading & Water level.
1155	Sampled MW-1.
1235	Offloaded water into field.
1315	Left site
1345	Arrived at office to store, pack Samples & fill out COCs.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW- 1
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny

SITE: IDT
DATE 2-2-09
PROJECT# 27011-07-4100
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER ____ YES ____ NO
PUMP CYCLING ____ YES ____ NO
pH meter: ________
METER READING:
FLOW RATE: ________

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 32.22 TIME 1045 W.L. AFTER PURGE ________ TIME ________
W.L. FOR 80% RECOVERY ________ W.L. TIME OF SAMPLE ________ DATE ________ TIME ________

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 46.5
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 46.5-32.22=14.28×1.96=27.98gal
TIME PURGE BEGINS ________
ACTUAL AMOUNT PURGED 34.07gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1153	19.5	867	6.86	cloudy brown/no odor	125	3.27 mg/L
1153	19.5	866	6.87	" " " "	126	~~19.9~~ mg/L
1154	19.6	866	6.88	" " " "	126	1.99 mg/L JNW

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2
SAMPLING TIME 1155
DATE 2-9-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL --------
PREVIOUSLY USED IN WELL MW-2
SITE IDT
DECON METHOD/STEAM TIME None
RINSEATE SAMPLE ____ YES ✓ NO ID —

SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ________
SITE ________
DECON METHOD/STEAM TIME ________
RINSEATE SAMPLE ____ YES ____ NO ID ________

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES X NO ID — QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ____ YES X NO ID ------ FIELD BLANK ____ YES X NO ID ------ INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 2.12 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 2
DATE 2-2-09
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter: ______
METER READING: ______
FLOW RATE: ______

WATER LEVEL INFORMATION
MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 31.22 TIME 950
W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______
W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION
MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-31.22=13.78×1.96=27gal
TIME PURGE BEGINS ______
ACTUAL AMOUNT PURGED 34.19gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1022	19.1	699	6.79	Silty cloudy/no odor	117	9.9%
1023	19.1	702	6.80	" " " "	117	0.87mg/L
1024	19.2	703	6.80	" " " "	118	

WATER SAMPLING INFORMATION
MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2
SAMPLING TIME 1025
DATE 2-2-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2
HOSE REEL --------
PREVIOUSLY USED IN WELL MW-4
SITE FAT
DECON METHOD/STEAM TIME None
RINSEATE SAMPLE ___ YES ✓ NO ID —

SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ______
SITE ______
DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ✓ NO ID —
QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------
FIELD BLANK ___ YES X NO ID ------
INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 2.20+ mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW- 3
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny

SITE: IDT
DATE 2-2-09
PROJECT# 27011-07-4100
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD ____
CONTINUOUS PUMPER ___YES ___NO
PUMP CYCLING ___YES ___NO
pH meter: ____
METER READING ____
FLOW RATE: ____

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 32.52 TIME 800
W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____
W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL -------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-32.52=12.48×1.96=24.46 gal
TIME PURGE BEGINS ____
ACTUAL AMOUNT PURGED 30.78 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
832	17.1	918	6.79	cloudy / no odor	136	8.09
833	17.1	919	6.80	" " "	137	0.77 mg/L
834	17.0	919	6.80	" " "	135	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2
SAMPLING TIME 835
DATE 2-2-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2
HOSE REEL --------
PREVIOUSLY USED IN WELL 100A
SITE Raytheon
DECON METHOD/STEAM TIME Steam w/ Tie 30 min
RINSEATE SAMPLE ____YES ✓ NO I D —

SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____
SITE ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____YES ____NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___YES X NO ID —
QA/QC SPIKE ____YES X NO ID ------
DUPLICATE ___YES X NO ID ------
FIELD BLANK ___YES X NO ID ------
INTER-LAB SPLIT ___YES X NO ID ----

NOTES

RB TAKEN (4893)
(ON HOLD)

CHLORINE: 0.21 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW-4
DATE 2-2-09
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter: ______
METER READING:
FLOW RATE: ______

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 35.61 TIME 855 W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45' - 35.61 = 9.39 × 1.96 = 18.40 gal
TIME PURGE BEGINS ______
ACTUAL AMOUNT PURGED 26.17 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
932	18.0	940	6.89	cloudy/no odor	90	5.92
933	18.0	939	6.90	" " "	90	0.51 mg/L
934	18.0	939	6.90	" " "	89	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D
APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2
SAMPLING TIME 935
DATE 2-2-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL --------
PREVIOUSLY USED IN WELL MW-3
SITE IDT
DECON METHOD/STEAM TIME None
RINSEATE SAMPLE ___ YES ✓ NO I D —

SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ______
SITE ______
DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ✓ NO ID — QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 1.07 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT

WELL\SAMPLE DESIGNATION ~~MW~~ L-5 Comp

DATE 2-2-09

SAMPLE SOURCE A

PROJECT# 27011-07-4200

AMBIENT CONDITIONS Clear & Sunny

SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ___YES ___NO pH meter: ____ FLOW RATE: ____

PUMP CYCLING ___YES ___NO METER READING ____

WATER LEVEL INFORMATION

MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE N/A TIME____ W.L. AFTER PURGE____ TIME____

W.L. FOR 80% RECOVERY____ W.L. TIME OF SAMPLE____ DATE____ TIME____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2

WELL DEPTH____ DIAMETER 4" #CASING VOLUMES (PROTOCOL) 3

SCREENED INTERVAL ----- N/A PUMP SETTING____

PURGE VOLUME CALCULATION____

TIME PURGE BEGINS____ ACTUAL AMOUNT PURGED____ pH INSTRUMENT ULTRA#~~312~~ 309

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
COMP	11.5	2023	7.24	CLEAR/NO ODOR	121	11.30
						99.1%

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID ~~GRUND-2~~ SAMPLING TIME Comp DATE 2-2-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL -------- SAMPLING DEVICE ID SAMPLE PORT

PREVIOUSLY USED IN WELL____ PREVIOUSLY USED IN WELL____

SITE____ N/A SITE____

DECON METHOD/STEAM TIME____ DECON METHOD/STEAM TIME____

RINSEATE SAMPLE___YES___NO ID____ RINSEATE SAMPLE___YES___NO ID____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK___YES ✓ NO ID____ QA/QC SPIKE___YES X NO ID ------

DUPLICATE___YES X NO ID ------ FIELD BLANK___YES X NO ID ------ INTER-LAB SPLIT___YES X NO ID ----

NOTES

CHLORINE: 0.09 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION ~~MW-~~ L-10 Comp
DATE 2-2-09
SAMPLE SOURCE A
PROJECT# 27011-07-4~~1~~200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ____ YES ____ NO PUMP CYCLING ____ YES ____ NO pH meter: ____ METER READING ____ FLOW RATE: ____

WATER LEVEL INFORMATION

MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE N/A TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH ____ DIAMETER 4" #CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------ N/A PUMP SETTING ____
PURGE VOLUME CALCULATION ____
TIME PURGE BEGINS ____ ACTUAL AMOUNT PURGED ____ pH INSTRUMENT ULTRA#~~312~~ 309

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
COMP	13.3	1604	6.84	SLIGHT BROWN/NO ODOR	120	9.89
						83.6%

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID ~~GRUND-2~~ SAMPLING TIME Comp DATE 2-2-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL -------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____ PREVIOUSLY USED IN WELL ____
SITE ____ N/A SITE ____
DECON METHOD/STEAM TIME ____ DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO I D ____ RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ✓ NO ID ____ QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ____ YES X NO ID ------ FIELD BLANK ____ YES X NO ID ------ INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 0.04 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION ~~MW-~~ Source
DATE 2-2-09
SAMPLE SOURCE A
PROJECT# 27011-07-4100
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter: ____
METER READING: ____
FLOW RATE: ____

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE N/A TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH ____ DIAMETER 4" #CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------ PUMP SETTING ____
PURGE VOLUME CALCULATION N/A
TIME PURGE BEGINS ____ ACTUAL AMOUNT PURGED ____ pH INSTRUMENT ULTRA#~~312~~ 309

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1055	14.7	1249	6.81	CLEAR/NO ODOR	111	8.1[illegible]
						75.3%

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

SAMPLING DEVICE ID GRUND-2 SAMPLING TIME ~~Comp~~ 1045 APPROXIMATE DEPTH OF GRAB N/A DATE 2-2-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL -------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____ PREVIOUSLY USED IN WELL ____
SITE N/A SITE ____
DECON METHOD/STEAM TIME ____ DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ___ YES ___ NO I D ____ RINSEATE SAMPLE ___ YES ___ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ✓ NO ID ____ QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.04 mg/L

MV\I:\SAMPLING\Samplog\10/27/2008

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
PO #: 27011-07-7000
Group #: 303170
Project #: RECYCLED-WATER-STUDY
Project Manager: Richard.C.Zimmer
Phone: 626-386-1157

The following samples were received from you on **February 03, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Matrix	Sample Date
200902030008	L5 COMP	Water	02-Feb-2009 0000
	@PFC		
200902030009	L10 COMP	Water	02-Feb-2009 0000
	@NDMA @PFC		
200902030010	MW1	Water	02-Feb-2009 1155
	@NDMA @PFC		
200902030011	MW2	Water	02-Feb-2009 1025
	@NDMA @PFC		
200902030012	MW3	Water	02-Feb-2009 0835
	@NDMA @PFC		
200902030013	MW4	Water	02-Feb-2009 0935
	@NDMA @PFC		
200902030014	SOURCE	Water	02-Feb-2009 1045
	@525PLUS @NDMA @PFC EDTA by Ion Chrom-Subcontract NTA by Ion Chrom- Subcontract		

Test Description

@525PLUS -- Semivolatiles by GCMS
@NDMA -- Nitrosamines by CLLE
@PFC -- Perfluorinated compounds

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14435

PROJECT NAME SCVWD Recycled Water

SAMPLERS T. MURPHY (PRINT)

T. Murphy (SIGN)

PROJECT NUMBER 27011-07-4800

RECORDER T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- A. 40-ml VOA Vial
- B. Glass Liter
- [✓ C. Plastic 500-ml]
- D. Plastic Liter
- E. Brass Tube
- F. Other

SAMPLE DESCRIPTION CODES
- [✓ A. Ground Water]
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other

TAT CODES
- [✓ 1. Standard]
- 2. 48 Hour
- 3. 24 Hour
- 4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL		Field Filtered (check)	ANALYSIS REQUESTED BROMIDE									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3/2/09	COMP	L-5 COMP	—	—	—	C	A	1					✓									1				Rec'd 6.8°C		
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp.

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Container Sealed with Custody Seal: Yes ☐ No ☑

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Hand Deliver	Cooler	NO	T. Murphy	3/2/09	09:30		3-2-09	09:30

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739

☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101

☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14437

PROJECT NAME SCVWD Recycled Water
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS T. MURPHY (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	ANALYSIS REQUESTED: HAAs	Total Phosphate								TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3/2/09	COMP	L-5 COMP	—	—	—	B	A	1					X									1						
2		COMP	L-5 COMP	—	—	—	C	A				1			X								1						
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	NO		3/2/09	1515		3/2/09	1515

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14436

PROJECT NAME SCVWD Recycled Water

PROJECT NUMBER 27011-07-7000

RECORDER T. Murphy (SIGN)

SAMPLERS T. MURPHY (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B.] Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB MWH

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HN0$_3$	HCL	Thio	Field Filtered (check)	ANALYSIS REQUESTED NDMA									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3/2/09	COMP	L-5 COMP	—	—	—	B					1		X									1						
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature) T. Murphy	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Commercial Courier	Cooler	NO	Thomas Murphy	3/2/09				

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below)

Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD RECYCLED WATER STUDY
Field Activity: IDT LYSIMETER SAMPLING
Weather:

Project No.: 27011-07-4200
Date: 3/2/09
Logged by: T. MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0730	DEPART MV FOR IDT CAMPUS
0800	ARRIVE AT IDT. CHECK IN WITH SECURITY
0815	BEGIN COLLECTING L-5 COMPOSITE SAMPLE
	L1-5 100 ml
	L2-5 1100 ml
	L3-5 0
	* L4-5 680 ml
	* MORE WATER AVAILABLE HERE. I STOPPED AT 680 ml BECAUSE I HAD ENOUGH FOR ALL ANALYSES.
	ALL LYSIMETERS RECHARGED TO 15" hg.
0915	DEPART IDT. HEADING TO SCVWD LAB.
0930	DELIVER BROMIDE SAMPLE TO SCVWD LAB.
1030	RETURN TO MV OFFICE.

Comments/Remarks:

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
PO #: 27011-07-7000
Group #: 303834
Project #: RECYCLED-WATER-STUDY
Project Manager: Richard.C.Zimmer
Phone: 626-386-1157

The following samples were received from you on **March 03, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Matrix	Sample Date
200903030014	L-5 Composite @NDMA	Water	02-Mar-2009 0000

Test Description

@NDMA -- Nitrosamines by CLLE

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14454

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Castro / Murphy (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] 250 Poly ~~Brass Tube~~
[✓ F.] Other 500ml Steril

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	See Note 1	See Note 2	TOC/DOC	TDS	8010/8020	HAA6	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	4-28-09	1220	MW-5	14.7	898	6.65	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							A	A			3							X					1		✓	✓			
6							B	A	1										X				1		✓				
7		↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8		1120	MW-4	18.3	922	6.68	D	A	1					X									1		✓				
9		↓	↓	↓	↓	↓	C	A		1					X								1		✓				
10							E	A				1				X							1		✓				
11							E	A	1								X						1		✓				
12							A	A			3							X					1		✓	✓			
13							B	A	1										X				1		✓				
14	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
15																									✓				
16																									✓				

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride,
2. Boron, Calcium, Magnesium, Sodium, Potasium

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-53,55,56	Thomas Murphy	4/28/09	1426		4/28/09	1426

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14453

PROJECT NAME Recycled Water Study
SAMPLERS Castro / Murphy (PRINT)
(SIGN)
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E. ~~Brass Tube~~ 250 Poly]
F. Other 500ml glass

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6 full list	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	4-28-09	900	MW-1	18.5	915	6.48	D	A	1					X											✓				
2	↓	↓		↓	↓	↓	C	A		1					X										✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X									✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X								✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X							✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X						✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X					✓				
8	↓	1010	MW-2	15.9	744	6.71	D	A	1					X											✓				
9	↓	↓	↓	↓	↓	↓	C	A		1					X										✓				
10	↓	↓	↓	↓	↓	↓	F	A				1				X									✓				
11	↓	↓	↓	↓	↓	↓	E	A	1								X								✓				
12	↓	↓	↓	↓	↓	↓	A	A			3							X							✓	✓			
13	↓	↓	↓	↓	↓	↓	B	A	1										X						✓				
14	↓	↓	↓	↓	↓	↓	E	A				1								X					✓				
15																													
16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.

2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-54, 55, 56	Thomas Murphy	4/28/09	1426		4/28/09	426

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14455

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER
(SIGN)

SAMPLERS Castro / Murphy
(PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- A. 40-ml VOA Vial
- ~~B. Glass Liter~~ 250 Amber glass
- C. Plastic 500-ml
- ~~D. Plastic Liter~~ Amber 500 glass
- ~~E. Brass Tube~~ 250 Amber glass
- F. Other 250 Poly

SAMPLE DESCRIPTION CODES
- A. Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other ________

TAT CODES
- 1. Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. ________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	$HN0_3$	HCL	H_2SO_4	Field Filtered (check)	See note 1	See note 2	TOC	DOC	TDS	8010/8020	HAA6	Total Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	4-28-09	COMP	L5 COMP	13.8	2427	6.93	C	A	1					X											✓				
2	↓	↓	↓	↓	↓	↓	F	A		1					X										✓				
3							E	A				1				X									✓				
4							D	A				1					X								✓				
5							F	A	1									X							✓				
6							A	A			2								X						✓	✓			
7							E	A	1											X					✓				
8			↓	↓	↓	↓	F	A				1									X				✓				
9			L10 COMP	14.0	1554	7.21	C	A	1					X											✓				
10			↓	↓	↓	↓	F	A		1					X										✓				
11							E	A				1				X									✓				
12							D	A				1					X								✓				
13							F	A	1									X							✓				
14							A	A			2								X						✓	✓			
15							E	A	1											X					✓				
16	↓	↓	↓	↓	↓	↓	F	A				1									X				✓				

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp. 4.2

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-53,54,56	Thomas Murphy	4/28/09	1426		4/28/09	1426

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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☐ OTHER ________________ TEL ________ FAX ________

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14456

PROJECT NAME Recycled Water Study
SAMPLERS Castro / Murphy (PRINT)
(SIGN)
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
(A.) 40-ml VOA Vial
(B.) Glass Liter
(C.) Plastic 500-ml
(D.) Plastic Liter
(E.) ~~Brass Tube~~ 250 poly
(F.) Other 250 S/O3S

SAMPLE DESCRIPTION CODES
(A.) Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
(H.) Blank/Spike
I. Other ______

TAT CODES
(1.) Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check) NaOH	See note 1	See note 2	TOC/DOC	TDS	8010/8020	HAA6	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	4-28-09	1010	Source	18.0	1209	6.80	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	E	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓				
6	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8	↓	↓	↓	↓	↓	↓	D	A	1												X		1		✓				
9	↓	↓	↓	↓	↓	↓	C	A					1									X	1		✓				
10	↓	—	Temp Blank	—	—	—	A	H	1															*	✓	NA	*		
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.

Field / Container Temp. 4°C

* Temp. to be measured & rec. upon receipt of samples at lab ______ °C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-53, 54, 55	Thomas Murphy	4/28/09	1426		4/28/09	1426

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ OTHER ______ TEL ______ FAX ______

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LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14452

PROJECT NAME Reclaimed Water Study
PROJECT NUMBER 27011-07-4200
RECORDER Weglarf (SIGN)
SAMPLERS Castro / Murphy (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D.] Plastic ~~Liter~~ 250 ml
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO3	HCL		Field Filtered (check)	ANALYSIS REQUESTED: Bromide								TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	4-28-09		08502E08DW12	↑	MW-1		D	A	1					X								1		✓				
2			08502E08DW11		MW-2		D	A	1					X								1		✓				
3			08502E07A014		MW-3		D	A	1					X								1		✓				
4			08502E07A015	2-8°C	MW-4		D	A	1					X								1		✓				
5			L5 COMP				D	A	1					X								1		✓				
6			L10 COMP				D	A	1					X								1		✓				
7	↓		Source	↓			D	A	1					X								1		✓				
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
	Greg Gibson	4-28-09	12:40

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	None	Thomas Murphy	4/28/09	1240			

Send Lab Results to (Name): Wes Hawthorne cc Norman Wold (Check Office Below)

Verbals Requested: Yes ☒ No ☐

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REV. 6/02

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CHAIN OF CUSTODY

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EMLab P&K

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Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * **(866) 888-6653**

WEATHER		Fog	Rain	Snow	Wind	Clear
LEVEL	None					
	Light					
	Moderate					
	Heavy					

CONTACT INFORMATION

Company: Locus Technologies
Contact: Norman Wong
Phone: 650-960-1640
Address: 299 Fairchild Dr. M.V. Ca 94043
Special Instructions:

PROJECT INFORMATION

Project ID: 27011-07-4200
Project Desc.: Recycled Water Study
Project Zip Code:
Sampling Date & Time: 4-28-09
PO Number:

TURN AROUND TIME CODES - (TAT)

STD - Standard (DEFAULT)
ND - Next Business Day
SD - Same Business Day Rush
WH - Weekend/Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

SAMPLE ID	DESCRIPTION	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	NOTES (Time of day, Temp, RH, etc.)
MW-1		W	STD	1L	
MW-2		W		1L	
MW-3		W		1L	
MW-4		W		1L	
L5-Comp		W		150ml(min)	
L10-Comp		W		150ml(min)	
Source		W		1L	

REQUESTED SERVICES (✔ Boxes)

SAMPLE ID	Non-Culturable: Spore Trap: Fungi - Spore Trap Analysis	Spore Trap Analysis - Other particles	Tape Swab Bulk: Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	Culturable (BioCassette™· Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plate): 1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain and Counts (Culturable Air and Surface Bacteria)	*Legionella* culture	Total Coliform, *E.coli* (Presence/Absence)	Membrane Filtration (Please specify organism)	MPN Bacteria (Please specify organism) Total/Fecal Coliforms	QuantiTray - Sewage Screen	Other Requests: Asbestos Analysis - PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis - PLM (EPA method 600/R-93-116)	PCR (please specify test)	HPC	MPN Bacteria - E.Coli
MW-1													☒					☒	☒
MW-2													☒					☒	☒
MW-3													☒					☒	☒
MW-4													☒					☒	☒
L5-Comp													☒					☒	☒
L10-Comp													☒					☒	☒
Source													☒					☒	☒

SAMPLE TYPE CODES

BC - BioCassette™	CP - Contact Plate	T - Tape	D - Dust
A1S - Andersen	ST - Spore Trap: Zefon, Allergenco, Burkard...	SW - Swab	[✓ W - Water]
SAS - Surface Air Sampler		B - Bulk	SO - Soil

O - Other:

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
X	1315 4/28/09	X An Morrissey	4-28-09 13:13

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html

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MWH# 305575. MWH# 305575   v rpt   vedd

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ____________________

SAMPLES CHECKED AGAINST COC BY: ________

SAMPLES LOGGED IN BY: ________

SAMPLE TEMP WHEN REC'D AT LAB: ____ (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ **PARTIALLY FROZEN** ___ **THAWED** ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ (check for yes)

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: Locus

P.O.# / PROJECT JOB #: 27011-07-7000

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE:

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX*	GRAB	COMP	NDMA	PFC's	EDTA	EPA525+	SAMPLER COMMENTS
4/28/09	comp	L5 Comp	IDT	RGW		X	0	1	0	0	
	comp	L10 Comp				X	1	1	0	0	
	900	MW-1			X		2	1	0	0	
	1010	MW-2			X		2	1	0	0	
	1220	MW-3			X		2	1	0	0	
	1120	MW-4			X		2	1	0	0	
	1010	Source			X		2	1	1	2	

*** MATRIX TYPES:**

RSW = Raw Surface Water	CFW = Chlor(am)inated Finished Water	CWW = Chlorinated Waste Water	BW = Bottled Water	SO = Soil
RGW = Raw Ground Water	FW = Other Finished Water	WW = Other Waste Water	SW = Storm Water	SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		Henry Castro IV	Locus Technologies	4/28/09	
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD/IDT
Field Activity: Well Sampling
Weather: clear

Project No.: 27011-07-4200
Date: 4-28-09
Logged by: H. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
715	Loaded truck, purge equip., tank & coolers.
800	Arrived onsite, checked in at lobby. Calibrated meter.
815	AT MW-1. Take DO reading & water level.
900	Sampled MW-1.
930	AT MW-2. Take DO reading & water level.
1010	Sampled MW-2.
1035	AT MW-4. Take DO reading & water level.
1120	Sampled MW-4.
1140	AT MW-3. Take DO reading & water level.
1220	Sampled MW-3.
1235	Offloaded water into field.
1255	Left site.
1320	Arrived at office to store & pack samples.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 1
DATE 4-28-09
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER YES NO
PUMP CYCLING YES NO
pH meter
METER READING
FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 29.51 TIME 820 W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 46.5
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 46.5 - 29.51 = 16.99 × 1.96 = 33.30 gal.
TIME PURGE BEGINS 840
ACTUAL AMOUNT PURGED 38.74 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
857	18.5	916	6.47	cloudy brown/ no odor	117	2.14 mg/L
858	18.4	915	6.48	" " " "	117	21.1%
859	18.4	915	6.48	" " " "	116	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/ sample port
SAMPLING TIME 900
DATE 4-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2
HOSE REEL --------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-
PREVIOUSLY USED IN WELL ______
SITE IDT
SITE ______
DECON METHOD/STEAM TIME Steam w/ H2O 30 min
DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ____ YES X NO I D —
RINSEATE SAMPLE ____ YES ____ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES X NO ID —— QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 2.02 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 2
DATE 4-28-09
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: CONTINUOUS PUMPER ___ YES ___ NO pH meter FLOW RATE
PUMP CYCLING ___ YES ___ NO METER READING

WATER LEVEL INFORMATION

MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 27.71 TIME 9:30 W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45' - 27.71 = 17.29 × 1.96 = 33.88 gal
TIME PURGE BEGINS ______
ACTUAL AMOUNT PURGED 42.18 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1007	15.9	744	6.70	cloudy/no odor	71	10.9%
1008	15.9	744	6.71	" " "	71	1.2mg/L
1009	16.0	744	6.71	" " "	70	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/ sample port SAMPLING TIME 1010 DATE 4-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL -------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-1 PREVIOUSLY USED IN WELL ______
SITE IDT SITE ______
DECON METHOD/STEAM TIME [illegible] DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES X NO ID — RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES X NO ID — QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 2.20+ mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW- 3
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny

SITE: IDT
DATE 4-28-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flowrate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER YES NO
PUMP CYCLING YES NO
pH meter
METER READING
FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 29.52 TIME
W.L. AFTER PURGE
TIME
W.L. FOR 80% RECOVERY
W.L. TIME OF SAMPLE
DATE
TIME

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40
PURGE VOLUME CALCULATION 45-29.52 = 15.5 x 1.96 = 30.38 gal.
TIME PURGE BEGINS
ACTUAL AMOUNT PURGED 37.47 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
	14.7	8.97	6.64	cloudy/no odor	119	9.7%
	14.7	898	6.65	" " "	119	0.84 mg/l
	14.8	898	6.65	" " "	119	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/sample port
SAMPLING TIME 1220
DATE 4-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2
HOSE REEL -------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-4
PREVIOUSLY USED IN WELL
SITE IDT
SITE
DECON METHOD/STEAM TIME
DECON METHOD/STEAM TIME
RINSEATE SAMPLE YES X NO I D —
RINSEATE SAMPLE YES NO ID

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK YES X NO ID —— QA/QC SPIKE YES X NO ID ------
DUPLICATE YES X NO ID ------ FIELD BLANK YES X NO ID ------ INTER-LAB SPLIT YES X NO ID ----

NOTES

CHLORINE: 0.29 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 4
DATE 4-28-09
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER YES NO
PUMP CYCLING YES NO
pH meter
METER READING
FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 31.78 TIME ___ W.L. AFTER PURGE ___ TIME ___
W.L. FOR 80% RECOVERY ___ W.L. TIME OF SAMPLE ___ DATE ___ TIME ___

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-31.78=13.22×1.96=25.91 gal
TIME PURGE BEGINS ___
ACTUAL AMOUNT PURGED 31.78gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
[illegible]	18.4	921	6.69	cloudy/no odor	110	4.94 mg/L
	18.3	922	6.68	" " "	110	17.4%
	18.3	922	6.68	" " "	110	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/sample port
SAMPLING TIME 1120
DATE 4-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL ------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-2 PREVIOUSLY USED IN WELL ___
SITE IDT SITE ___
DECON METHOD/STEAM TIME ___ DECON METHOD/STEAM TIME ___
RINSEATE SAMPLE ___ YES X NO I D — RINSEATE SAMPLE ___ YES ___ NO ID ___

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES X NO ID — QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 2.07 mg/L

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: IDT SAMPLING
Weather: CLEAR/WINDY

Project No.: 27011-07-4200
Date: 4/28/09
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS			
0800	ON SITE AT IDT CAMPUS. CHECK IN WITH SECURITY. NO CONES ON WELLS.			
0830	BEGIN COLLECTING COMPOSITE SAMPLES			
	L1-5	50 ml	L1-10	1425 ml
	L2-5	825 ml	L2-10	1500 ml
	L3-5	200 ml	L3-10	0
	L4-5	850 ml	L4-10	0
	ALL LYSIMETERS WERE RECHARGED TO 15" hg			
1010	COLLECT SOURCE SAMPLE.			
1100	FILLING BOTTLES FOR L5 COMP & L10 COMP. FOR L5 COMP I SKIPPED NDMA. ALL OTHER SAMPLES COLLECTED WITH MINIMUM VOLUME, AT LEAST.			
1145	DEPART FOR SCVWD TO DELIVER BROMIDE SAMPLES.			
1240	SCVWD SIGNS FOR SAMPLES.			
1310	RETURN TO MV OFFICE.			

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW. L5-COMP
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny
SITE: IDT
DATE 4/28/09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter ______ FLOW RATE ______
METER READING ______

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE N/A TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH ______ N/A
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ---
PUMP SETTING ______
PURGE VOLUME CALCULATION ______
TIME PURGE BEGINS ______
ACTUAL AMOUNT PURGED ______
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
COMP	13.8	2427	6.93	CLEAR/NO ODOR	60	70.2/7.36

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2
SAMPLING TIME ______
DATE ______

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2
HOSE REEL --------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ______ N/A
PREVIOUSLY USED IN WELL ______
SITE ______
SITE ______
DECON METHOD/STEAM TIME ______
DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO I D ______
RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ✓ NO ID ______ QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.07

MVI:\SAMPLING\Samplog\10/27/2008

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION ~~MW.~~ L10 COMP
DATE 4/28/09
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ___ YES ___ NO ___ pH meter ______ FLOW RATE ______
PUMP CYCLING ___ YES ___ NO ___ METER READING ______

WATER LEVEL INFORMATION

MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE N/A TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH N/A DIAMETER 4" #CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ----- PUMP SETTING ______
PURGE VOLUME CALCULATION ______
TIME PURGE BEGINS ______ ACTUAL AMOUNT PURGED ______ pH INSTRUMENT ULTRA#~~312~~ 309

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
COMP	14.0	1554	7.21	CLEAR / NO ODOR	75	74.1 / 8.36

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 SAMPLING TIME ______ DATE ______

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL -------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL N/A PREVIOUSLY USED IN WELL ______
SITE ______ SITE ______
DECON METHOD/STEAM TIME ______ DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO I D ______ RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ✓ NO ID ______ QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.12

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION ~~MW~~ SOURCE

SAMPLE SOURCE A

AMBIENT CONDITIONS Clear & Sunny

SITE: IDT

DATE 4/28/09

PROJECT# 27011-07-4200

SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD

CONTINUOUS PUMPER __ YES __ NO

PUMP CYCLING __ YES __ NO

pH meter

METER READING

FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC

INSTRUMENT USED SJ-1

W.L. BEFORE PURGE N/A TIME __ W.L. AFTER PURGE __ TIME __

W.L. FOR 80% RECOVERY __ W.L. TIME OF SAMPLE __ DATE __ TIME __

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2

WELL DEPTH N/A

DIAMETER 4"

#CASING VOLUMES (PROTOCOL) 3

SCREENED INTERVAL --

PUMP SETTING

PURGE VOLUME CALCULATION

TIME PURGE BEGINS

ACTUAL AMOUNT PURGED

pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1010	18.0	1209	6.80	CLEAR/NO ODOR	78	58.7/5.69

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID GRUND-2

SAMPLING TIME

DATE -- -- --

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
N/A						
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL --------

PREVIOUSLY USED IN WELL N/A

SITE

DECON METHOD/STEAM TIME

RINSEATE SAMPLE __ YES __ NO I D __

SAMPLING DEVICE ID SAMPLE PORT

PREVIOUSLY USED IN WELL

SITE

DECON METHOD/STEAM TIME

RINSEATE SAMPLE __ YES __ NO ID __

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK __ YES ✓ NO ID __ QA/QC SPIKE __ YES X NO ID ------

DUPLICATE __ YES X NO ID ------ FIELD BLANK __ YES X NO ID ------ INTER-LAB SPLIT __ YES X NO ID ----

NOTES

CHLORINE: 0.14

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
PO #: 30-12408
Group #: 305575
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Richard.C.Zimmer
Phone: 626-386-1157

The following samples were received from you on **April 29, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id		Matrix	Sample Date
200904290023	L-5 Composite		Water	28-Apr-2009 0000
	@PFC			
200904290024	L-10 Composite		Water	28-Apr-2009 0000
	@NDMA_SPE	@PFC		
200904290025	MW-1		Water	28-Apr-2009 0900
	@NDMA_SPE	@PFC		
200904290026	MW-2		Water	28-Apr-2009 1010
	@NDMA_SPE	@PFC		
200904290027	MW-3		Water	28-Apr-2009 1220
	@NDMA_SPE	@PFC		
200904290028	MW-4		Water	28-Apr-2009 1120
	@NDMA_SPE	@PFC		
200904290029	Source		Water	28-Apr-2009 1010
	@525PLUS EDTA	@NDMA_SPE	@PFC	

Test Description

@525PLUS -- Semivolatiles by GCMS
@NDMA_SPE -- Nitrosamines by GCMS
@PFC -- Perfluorinated compounds

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14466

PROJECT NAME SCVWD Recycled Water Study

PROJECT NUMBER 27011-07-7000

RECORDER T. MURPHY (SIGN)

SAMPLERS T. MURPHY (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B. Glass Liter]
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB MWH

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO$_3$	HCL	Thio	Field Filtered (check)	NDMA									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	5/18/09	COMP	L-5 COMP	—	—	—	B	A				1		X									1		✓				
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature) T. Murphy	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COMMERCIAL COURIER	COOLER	NONE	Thomas Murphy	5/18/09	1500			

Send Lab Results to (Name): NORMAN WONG (Check Office Below)

Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ____ TEL ____ FAX ____

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD RECYCLED WATER STUDY

Field Activity: IDT LYSIMETER SAMPLING

Weather:

Project No. 27011-07-7000

Date: 5/18/09

Logged by: T. MURPHY

Page 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0815	DEPART FOR IDT CAMPUS
0900	CHECK IN WITH SECURITY
	BEGIN COLLECTING COMPOSITE SAMPLE FROM L5 LYSIMETERS.
	L3-5 150ml
	L4-5 425 ml - did not extract all
	L1-5 50 ml
	L2-5 450 ml - did not extract all
	ALL LYSIMETERS, L5's & L10's WERE RECHARGED WITH
	15" hg
1000	DEPART. RETURN TO MV OFFICE.

Comments/Remarks:

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
PO #: 30-12408
COC #:
Group #: 306666
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Richard.C.Zimmer
Phone: 626-386-1157

The following samples were received from you on **May 19, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Matrix	Sample Date
200905190389	L-5 Composite @NDMA_SPE	Water	18-May-2009 0000

Test Description

@NDMA_SPE -- Nitrosamines by GCMS

Reported: 05/19/09

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14488

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E. ~~Brass Tube~~ 250 Poly]
[✓ F. Other 500ml glass]

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6 (full list)	total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	7-13-08	850	MW-1	18.9	911	6.45	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							A	A			3							X					1		✓	✓			
6							B	A	1										X				1		✓				
7		↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8		1000	MW-2	17.1	752	6.79	D	A	1					X									1		✓				
9							C	A		1					X								1		✓				
10							F	A				1				X							1		✓				
11							E	A	1								X						1		✓				
12							A	A			3							X					1		✓	✓			
13							B	A	1										X				1		✓				
14	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
15																													
16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride,

2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-89,90,91,92		7/13/09	1400		7/13/09	1400

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14489

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)

SAMPLERS Henry Castasto (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- A. 40-ml VOA Vial
- B. Glass Liter
- C. Plastic 500-ml
- D. Plastic Liter
- E. ~~Brass Tube~~ 250 Poly
- F. Other 500ml Glass

SAMPLE DESCRIPTION CODES
- A. Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other

TAT CODES
- 1. Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	ANALYSIS REQUESTED: See Note 1	See Note 2	TOC/DOC	TDS	8010/8020	HAA6	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	7-13-09	1240	MW-3	16.1	979	6.48	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8	↓	1125	MW-4	15.4	901	6.74	D	A	1					X									1		✓				
9	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
10	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
11	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
12	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
13	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
14	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
15																													
16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-88, 90, 91, 93		7/13/09	1400		7/13/09	1400

Send Lab Results to (Name): Wes Howthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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REV. 6/02

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14490

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER
(SIGN)

SAMPLERS Henry Castro Jr
(PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- [✓ A.] 40-ml VOA Vial
- B. Glass Liter
- [✓ C.] Plastic 500-ml
- ~~D. Plastic Liter~~
- [✓ E.] ~~Brass Tube~~ 250 Amber Glass
- [✓ F.] Other 250 Poly

SAMPLE DESCRIPTION CODES
- [✓ A.] Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other ____

TAT CODES
- [✓ 1.] Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ____

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. ____

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HN0$_3$	HCL	H$_2$SO$_4$	Field Filtered (check)	ANALYSIS REQUESTED: See Note 1	See Note 2	TOC	DOC	TDS	8010/8020	HAA6	Total Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	7-13-09	comp	LS-COMP	22.5	2141	7.24	C	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	F	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	E	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A				1					X						1		✓				
5	↓	↓	↓	↓	↓	↓	F	A	1									X					1		✓				
6	↓	↓	↓	↓	↓	↓	A	A			2								X				1		✓	✓			
7	↓	↓	↓	↓	↓	↓	E	A	1											X			1		✓				
8	↓	↓	↓	↓	↓	↓	F	A				1									X		1		✓				
9	↓	↓	LID-COMP	23.4	1543	7.55	C	A	1					X									1		✓				
10	↓	↓	↓	↓	↓	↓	F	A		1					X								1		✓				
11	↓	↓	↓	↓	↓	↓	E	A				1				X							1		✓				
12	↓	↓	↓	↓	↓	↓	E	A				1					X						1		✓				
13	↓	↓	↓	↓	↓	↓	F	A	1									X					1		✓				
14	↓	↓	↓	↓	↓	↓	A	A			2								X				1		✓	✓			
15	↓	↓	↓	↓	↓	↓	E	A	1											X			1		✓				
16	↓	↓	↓	↓	↓	↓	F	A				1									X		1		✓				

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.

2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp. 4

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-88, 89, 91, 93		7/13/09	1400		7/13/09	1400

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14491

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E.] ~~Brass Tube~~ 250 Poly
[✓ F. Other] ~~250~~ 500 S1955

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H. Blank/Spike]
I. Other ________

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ________

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. ________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check) NaOH	See Note 1	See Note 2	TOC DOC	TDS	5030/8260	HAA6	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	7-13-09	950	SOURCE	25.0	1160	7.07	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							A	A			3							X					1		✓	✓			
6							B	A	1										X				1		✓				
7							E	A				1								X			1		✓				
8							D	A	1												X		1		✓				
9		↓	↓	↓	↓	↓	C	A					1									X	1		✓				
10	↓	—	Temp Blank	—	—	—	A	H	1															*	✓	NA	*		
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride. *Temp to be measured & rec. upon receipt of samples at lab

2. Boron, Calcium, Magnesium, Sodium, Potassium.

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-88, 89, 90, 93	Thomas Murphy	7/13/09	1400		7/13/09	1400

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14493

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLERS Henry Castato (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 Poly
[✓ F] Other 500ml Glass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6 full list	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	7-13-09	—	4931	—	—	—	D	H	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	H		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	H				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	H	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	H			3							X					1		✓	✓			
6	↓	↓	↓	↓	↓	↓	B	H	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	E	H				1								X			1		✓				
8	↓	—	4932	—	—	—	D	A	1					X									1		✓				
9	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
10	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
11	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
12	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
13	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
14	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
15																													
16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.

2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-89, 90, 91, 92, 88		7/13/09	1400		7/13/09	1400

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below)

Verbals Requested: Yes ☑ No ☐

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CHAIN OF CUSTODY

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San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * **(866) 888-6653**

	WEATHER	Fog	Rain	Snow	Wind	Clear
LEVEL	None					
	Light					
	Moderate					
	Heavy					

CONTACT INFORMATION

Company: Locus Technologies
Address: 299 Fairchild Dr. MV. Ca. 94043
Contact: Norman Wong
Special Instructions:
Phone: 650-960-1640

PROJECT INFORMATION

Project ID: 27011-07-4200
Project Desc.: Recycled Water Study
Project Zip Code:
Sampling Date & Time: 7-13-09
PO Number:

TURN AROUND TIME CODES - (TAT)

STD - Standard (DEFAULT)
ND - Next Business Day
SD - Same Business Day Rush
WH - Weekend/Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

SAMPLE ID	DESCRIPTION	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	NOTES (Time of day, Temp, RH, etc.)
MW-1		W	STD	1L	
MW-2		W	↓	1L	
MW-3		W	↓	1L	
MW-4		W	↓	1L	
L5-Comp		W	↓	150ml(Min)	
L10-Comp		W	↓	150ml(Min)	
Source		W	↓	1L	
4931		W	↓	1L	
4932		W	↓	1L	

REQUESTED SERVICES (✔ Boxes)

	Non-Culturable				Culturable										Other Requests					
	Spore Trap		Tape Swab Bulk		BioCassette™ Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plate															
SAMPLE ID	Fungi - Spore Trap Analysis	Spore Trap Analysis - Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain and Counts (Culturable Air and Surface Bacteria)	*Legionella* culture	Total Coliform, *E.coli* (Presence/Absence)	Membrane Filtration (Please specify organism)	MPN Bacteria (Please specify organism) E. Coli	QuantiTray - Sewage Screen	Asbestos Analysis - PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis - PLM (EPA method 600/R-93-116)	PCR (please specify test)	Total Fecal Coliforms	HPC	
MW-1													X					X	X	
MW-2													X					X	X	
MW-3													X					X	X	
MW-4													X					X	X	
L5-Comp													X					X	X	
L10-Comp													X					X	X	
Source													X					X	X	
4931													X					X	X	
4932													X					X	X	

SAMPLE TYPE CODES

BC - BioCassette™
A1S - Andersen
SAS - Surface Air Sampler
CP - Contact Plate
ST - Spore Trap: Zefon, Allergenco, Burkard...
T - Tape
SW - Swab
B - Bulk
D - Dust
[✓ **W** - Water]
SO - Soil
O - Other:

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
X	7-13-09 1230	X Vohan Tran	7/13/09 1238

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14492

PROJECT NAME Reclaimed Water Study

SAMPLERS H. Cotto / T. Murphy (PRINT)

(SIGN)

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D.] Plastic ~~Liter~~ 250ml
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO.

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED													LABORATORY USE ONLY		
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL		Field Filtered (check)	Bromide									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	7-15-09		08S02E08D012/MW-1 ✓				D	A	1					X									1		✓				
2			08S02E08D011/MW-2 ✓				D	A	1					X									1		✓				
3			08S02E07A014/MW-3 ✓				D	A	1					X									1		✓				
4			08S02E07A015/MW-4 ✓				D	A	1					X									1		✓				
5			L5 COMP ✓				D	A	1					X									1		✓				
6			L10 COMP ✓				D	A	1					X									1		✓				
7	↓		SOURCE ✓				D	A	1					X									1		✓				
8			4931 ✓				D	A	1					X									1		✓				
9	↓		4930 ✓				D	A	1					X									1		✓				
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature) Thomas Murphy	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	None	Thomas Murphy	7/13/09	1145		7/13/09	1140

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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inv# L0009144 MWH# 309844 ✓ rpt veda

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ____________

SAMPLE TEMP WHEN REC'D AT LAB: ____ (Compliance: 4 +/- 2°C)

CONDITION OF BLUE ICE: FROZEN ____ PARTIALLY FROZEN ____ THAWED ____

SAMPLES CHECKED AGAINST COC BY: ____________

SAMPLES LOGGED IN BY: ____________

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

MWH LABS CLIENT CODE: Locus

P.O.# / PROJECT JOB #: 27011-07-7000

SAMPLER PRINTED NAME AND SIGNATURE: H. Castro / J. Murphy

TAT requested: rush by adv notice only
STD ✓ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)
REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA	~~PFOA~~ PFCs	EDTA	EPA525+	SAMPLER COMMENTS
7-13-09		L5 comp	IDT	RGW		X	0	1	0	0	
		L10 comp				X	1	1	0	0	
		MW-1			X		2	1	0	0	
		MW-2			X		2	1	0	0	
		MW-3			X		2	1	0	0	
		MW-4			X		2	1	0	0	
		Source			X		2	1	1	2	
		4991			X		2	1	0	0	
		4992			X		2	1	0	0	

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:			Locus Tech.	7-13-09	
RECEIVED BY:	Jane Herring	Jane Herring	MWH	7-13-09	11:35
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD/IDT
Field Activity: Well Sampling
Weather: clear

Project No.: 27011-07-4200
Date: 7-13-09
Logged by: H. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
650	Loaded truck, equipment & coolers.
745	Arrived onsite, checked in at lobby.
800	AT MW-1. Take DO reading & water level.
850	Sampled MW-1.
920	AT MW-2. Take DO reading & water level.
1000	Sampled MW-2.
1030	AT MW-4. Take DO reading & water level.
1125	Sampled MW-4.
1200	AT MW-3. Take DO reading & water level.
1240	Sampled MW-3.
1255	Offloaded water into field.
1315	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 1
DATE 7-13-09
SAMPLE SOURCE A
PROJECT# 27011-07-4100
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: ____ CONTINUOUS PUMPER ___ YES ___ NO ___ pH meter: ______ FLOW RATE: ______
PUMP CYCLING ___ YES ___ NO ___ METER READING ______

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 31.59 TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-31.59=13.41X1.96=26.28gal
TIME PURGE BEGINS ______
ACTUAL AMOUNT PURGED 32.94gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
847	19.1	910	6.45	cloudy brown/no odor	111	1.94 mg/L
848	18.9	911	6.45	" " " "	113	19.6%
849	18.9	911	6.46	" " " "	112	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/Sample Port
SAMPLING TIME 850
DATE 7-13-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1 w/ ~~Sample Port~~
HOSE REEL --------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL 05MW-2U
PREVIOUSLY USED IN WELL ______
SITE Marle
SITE ______
DECON METHOD/STEAM TIME Steam w/liq 30min
DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO I D ______
RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ___ NO ID 4931
QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------
FIELD BLANK ___ YES X NO ID ------
INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 2.04 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: **IDT**

WELL\SAMPLE DESIGNATION **MW-** 2

DATE 7-13-09

SAMPLE SOURCE **A**

PROJECT# **27011-07-4200**

AMBIENT CONDITIONS **Clear & Sunny**

SAMPLER **H.CASTRO/ T.Murphy**

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD ____ CONTINUOUS PUMPER ___ YES ___ NO ___ PUMP CYCLING ___ YES ___ NO ___ pH meter: ____ METER READING ____ FLOW RATE ____

WATER LEVEL INFORMATION MEASURING POINT **TOC** INSTRUMENT USED **SJ-1**

W.L. BEFORE PURGE 29.68 TIME ____ W.L. AFTER PURGE ____ TIME ____

W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** C

PURGE DEVICE I.D. **GRUND-1**

WELL DEPTH 45'

DIAMETER **4"**

#CASING VOLUMES (PROTOCOL) **3**

SCREENED INTERVAL ------

PUMP SETTING 40'

PURGE VOLUME CALCULATION 45'-29.68=15.32×1.96=30.02 gal.

TIME PURGE BEGINS ____

ACTUAL AMOUNT PURGED 37.42

pH INSTRUMENT **ULTRA#312**

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
957	17.1	751	6.78	cloudy/no odor	67	[illegible]
958	17.1	753	6.79	" " "	67	2.1 mg/L
959	17.1	752	6.79	" " "	68	F9%

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** D

APPROXIMATE DEPTH OF GRAB **N/A**

SAMPLING DEVICE ID **GRUND-2** w/ Sample Port SAMPLING TIME 1000 DATE 7-13-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID **GRUND-1** HOSE REEL ------- SAMPLING DEVICE ID **SAMPLE PORT**

PREVIOUSLY USED IN WELL MW-1 PREVIOUSLY USED IN WELL ____

SITE IDT SITE ____

DECON METHOD/STEAM TIME ____ DECON METHOD/STEAM TIME ____

RINSEATE SAMPLE ___ YES ___ NO I D ____ RINSEATE SAMPLE ___ YES ___ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ✓ YES ___ NO ID 4951 QA/QC SPIKE ___ YES **X** NO ID ------

DUPLICATE ___ YES **X** NO ID ------ FIELD BLANK ___ YES **X** NO ID ------ INTER-LAB SPLIT ___ YES **X** NO ID ----

NOTES

CHLORINE: 2.20+ mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 4
DATE 7-13-09
SAMPLE SOURCE A
PROJECT# 27011-07-4100
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter
METER READING
FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 33.70 TIME ___ W.L. AFTER PURGE ___ TIME ___
W.L. FOR 80% RECOVERY ___ W.L. TIME OF SAMPLE ___ DATE ___ TIME ___

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-33.70=11.3×1.96=22.14 gal
TIME PURGE BEGINS ___
ACTUAL AMOUNT PURGED 30.19 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1122	15.4	900	6.74	cloudy/no odor	112	0.91mg/L
1123	15.4	901	6.74	" " "	113	8.7%
1124	15.4	901	6.75	" " "	112	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/ Sample Port SAMPLING TIME 1125 DATE 7-13-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1 HOSE REEL -------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-2 PREVIOUSLY USED IN WELL ___
SITE IDT SITE ___
DECON METHOD/STEAM TIME ___ DECON METHOD/STEAM TIME ___
RINSEATE SAMPLE ___ YES ___ NO I D ___ RINSEATE SAMPLE ___ YES ___ NO ID ___

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK X YES ___ NO ID 4931 QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.27 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW- 3
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny

SITE: IDT
DATE 7-13-09
PROJECT# 27011-07-4100
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: CONTINUOUS PUMPER YES NO PUMP CYCLING YES NO pH meter: FLOW RATE METER READING

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 31.22 TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45-31.22=13.78×1.96=27.[illegible]
TIME PURGE BEGINS ______
ACTUAL AMOUNT PURGED 35.17gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1237	16.1	978	6.47	cloudy/no odor	120	3.85mg/L
1238	16.1	979	6.48	" " "	119	16.4%
1239	16.1	979	6.49	" " "	119	

WATER SAMPLING INFORMATION MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/sample port SAMPLING TIME 1240 DATE 7-13-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1 HOSE REEL ------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-#4 PREVIOUSLY USED IN WELL ______
SITE IDT SITE ______
DECON METHOD/STEAM TIME ______ DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO I D ______ RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK X YES ___ NO ID 4931 QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.31 mg/L

Locus

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD

Field Activity: IDT SAMPLING

Weather:

Project No.: 27011-07-4200

Date: 7/13/09

Logged by: T. MURPHY

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0745	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY
0755	BEGIN COLLECTING COMPOSIT SAMPLES
	L1-5 150 ml L1-10 1225 ml
	L2-5 1100 ml L2-10 1325 ml
	L3-5 20 ml L3-10 0
	L4-5 700 ml L4-10 0
	ALL LYSIMETERS WERE RECHARGED TO 15" hg
0930	COLLECT SOURCE SAMPLE AND DUPLICATE
1030	FILLING BOTTLES FOR L5 & L10 COMP. FOR L5 I SKIPPED NDMA.
	ALL OTHER SAMPLES COLLECTED WITH MINIMUM VOLUME, AT LEAST.
1115	DEPART FOR SCVWD LAB TO DELIVER BROMIDE SAMPLES.
1245	RETURN TO MV OFFICE

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION LS-COMP
DATE 7-13-09
SAMPLE SOURCE A
PROJECT# 27011-07-4100
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD ____ CONTINUOUS PUMPER ___ YES ___ NO ___ pH meter ____ FLOW RATE ____
PUMP CYCLING ___ YES ___ NO ___ METER READING ____

WATER LEVEL INFORMATION

MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE N/A TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH ____ DIAMETER 4" #CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ----- PUMP SETTING ____
PURGE VOLUME CALCULATION N/A
TIME PURGE BEGINS ____ ACTUAL AMOUNT PURGED ____ pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
COMP	22.5	2141	7.24	CLEAR/NO ODOR	90	71.7% 6.48mg/l

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 SAMPLING TIME ____ DATE 7-13-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1 HOSE REEL -------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____ PREVIOUSLY USED IN WELL ____
SITE ____ SITE ____
DECON METHOD/STEAM TIME ____ DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ___ YES ___ NO I D ____ RINSEATE SAMPLE ___ YES ___ NO ID ____

N/A

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ___ NO ID ____ QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.19 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION L10 - COMP
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny

SITE: IDT
DATE 7-13-09
PROJECT# 27011-07-4100
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ____ YES ____ NO
PUMP CYCLING ____ YES ____ NO
pH meter ____
METER READING ____
FLOW RATE ____

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE N/A TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH ____ N/A
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING ____
PURGE VOLUME CALCULATION ____
TIME PURGE BEGINS ____
ACTUAL AMOUNT PURGED ____
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
COMP	23.4	1543	7.55	CLEAR / NO ODOR	100	75.3% 8.08 mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2
SAMPLING TIME ____
DATE 7-13-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1 HOSE REEL -------
PREVIOUSLY USED IN WELL ____ N/A
SITE ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO I D ____

SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____
SITE ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ____ YES ____ NO ID ____ QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ____ YES X NO ID ------ FIELD BLANK ____ YES X NO ID ------ INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 0.14 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION SOURCE
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny

SITE: IDT
DATE 7-13-09
PROJECT# 27011-07-4100
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: CONTINUOUS PUMPER YES NO pH meter FLOW RATE
PUMP CYCLING YES NO METER READING

WATER LEVEL INFORMATION

MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE N/A TIME ___ W.L. AFTER PURGE ___ TIME ___
W.L. FOR 80% RECOVERY ___ W.L. TIME OF SAMPLE ___ DATE ___ TIME ___

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH ___ DIAMETER 4" #CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------ N/A PUMP SETTING ___
PURGE VOLUME CALCULATION ___
TIME PURGE BEGINS ___ ACTUAL AMOUNT PURGED ___ pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
0930	25.10	1160	7.07	CLEAR/NO ODOR	84	65.3% 5.02 Mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 SAMPLING TIME ___ DATE 7-13-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1 HOSE REEL -------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL N/A PREVIOUSLY USED IN WELL ___
SITE ___ SITE ___
DECON METHOD/STEAM TIME ___ DECON METHOD/STEAM TIME ___
RINSEATE SAMPLE ___ YES ___ NO I D ___ RINSEATE SAMPLE ___ YES ___ NO ID ___

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ___ NO ID ___ QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.13 Mg/L

MWH Laboratories

750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 309844
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Rick Zimmer
Phone: 626-386-1157
PO #: 30-12408

The following samples were received from you on **July 15, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id			Sample Date
200907150167	L-5 Composite			13-Jul-2009 0000
	@PFC			
200907150168	L-10 Composite			13-Jul-2009 0000
	@NDMA_SPE	@PFC		
200907150169	MW-1			13-Jul-2009 ~~0000~~ 8:50
	@NDMA_SPE	@PFC		
200907150170	MW-2			13-Jul-2009 ~~0000~~ 10:50
	@NDMA_SPE	@PFC		
200907150171	MW-3			13-Jul-2009 ~~0000~~ 12:40
	@NDMA_SPE	@PFC		
200907150172	MW-4			13-Jul-2009 ~~0000~~ 11:25
	@NDMA_SPE	@PFC		
200907150173	Source			13-Jul-2009 ~~0000~~ 9:30
	@525PLUS EDTA	@NDMA_SPE	@PFC	
200907150174	4991 (TB)			13-Jul-2009 0000
	@NDMA_SPE	@PFC		
200907150175	4992 (FD)			13-Jul-2009 0000
	@NDMA_SPE	@PFC		

Test Description

@525PLUS -- Semivolatiles by GCMS
@NDMA_SPE -- Nitrosamines by GCMS
@PFC -- Perfluorinated compounds

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14497

PROJECT NAME SCVWD Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS MURPHY (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B.] Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB MWH

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL	THIO	Field Filtered (check)	ANALYSIS REQUESTED NDMA									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	8/3/09	COMP	L-5 COMP	—	—	—	B	A				1		X									1		✓				
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
		8-4-09	1:50

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
LAB PICKUP	COOLER	NONE		8-4-09				

Send Lab Results to (Name): NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

Locus

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Recycled Water Study
Field Activity: IDT LYSIMETER SAMPLING
Weather:

Project No.: 27011-07-4200
Date: 8/3/09
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0830	CHECK IN WITH SECURITY AT IDT
	BEGIN COLLECTING COMPOSIT SAMPLE FROM L5 LYSIMETERS
	L1-5 0 ml
	L2-5 700 ml
	L3-5 0 ml
	L4-5 300 ml
	ALL LYSIMETERS WERE RECHARGED TO 15" hg.

Comments/Remarks:

MWH Laboratories
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 311192
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Rick Zimmer
Phone: 626-386-1157
PO #: 30-12408

The following samples were received from you on **August 04, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Sample Date
200908040704	L-5 Composite	03-Aug-2009 00:00
	@NDMA_SPE	

Test Description

@NDMA_SPE -- Nitrosamines by GCMS

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14512

PROJECT NAME Recycled Water Study
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)
PROJECT NUMBER 27011-07-4200
RECORDER 9 Haylaf (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E. ~~Brass Tube~~ 250 Poly]
[✓ F. Other ~~500ml~~ 250 glass]

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Number of Containers and Preservation: Unpreserved	HNO₃	HCL	H2SO4/H3PO4	Field Filtered (check)	Analysis Requested: See Note 1	See Note 2	TOC/DOC	TDS	8010/8020	HAA6 Full List	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	9-28-09	900	MW-1	14.4	876	6.40	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							A	A			3							X					1		✓	✓			
6							B	A	1										X				1		✓				
7		↓	↓	↓	↓	↓	E	A				2								X			1		✓				
8		1050	MW-2	17.3	745	6.72	D	A	1					X									1		✓				
9							C	A		1					X								1		✓				
10							F	A				1				X							1		✓				
11							E	A	1								X						1		✓				
12							A	A			3							X					1		✓	✓			
13							B	A	1										X				1		✓				
14	↓	↓	↓	↓	↓	↓	E	A				2								X			1		✓				
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
9 Haylaf			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14513, 14, 15	Thomas Murphy	9/28/09	1400		9/28/09	1400

Send Lab Results to (Name): Wes Hawthorne cc/Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14513

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Curtis (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E.] ~~Brass Tube~~ 250 Poly
[✓ F. Other] 250, Amber glass

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO$_3$	HCL	H$_2$SO$_4$/H$_3$PO$_4$	Field Filtered (check)	ANALYSIS REQUESTED: See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6 Full List	Total Phosphates			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	9/28/09	1155	MW-3	16.0	963	6.41	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							A	A			3							X					1		✓	✓			
6							B	A	1										X				1		✓				
7							E	A				1								X			1		✓				
8		945	MW-4	15.8	879	6.61	D	A	1					X									1		✓				
9							C	A		1					X								1		✓				
10							F	A				1				X							1		✓				
11							E	A	1								X						1		✓				
12							A	A			3							X					1		✓	✓			
13							B	A	1										X				1		✓				
14							E	A				1								X			1		✓				
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14512, 14, 15	Thomas Murphy	9/28/09	1400		9/28/09	1400

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14515

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

RECORDER

(SIGN)

SAMPLERS Henry Castro Jr

(PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
B. Glass Liter
[✓ C.] Plastic 500-ml
D. Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 Amber glass
[✓ F.] Other 250ml poly

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH
1	9-28-09	comp	L5-Comp	21.4	2045	7.28
2	↓	↓	↓	↓	↓	↓
3	↓	↓	↓	↓	↓	↓
4	↓	↓	↓	↓	↓	↓
5	↓	↓	↓	↓	↓	↓
6	↓	↓	↓	↓	↓	↓
7	↓	↓	↓	↓	↓	↓
8	↓	↓	↓	↓	↓	↓
9	↓	↓	L10-Comp	21.2	1565	7.40
10	↓	↓	↓	↓	↓	↓
11	↓	↓	↓	↓	↓	↓
12	↓	↓	↓	↓	↓	↓
13	↓	↓	↓	↓	↓	↓
14	↓	↓	↓	↓	↓	↓
15	↓	↓	↓	↓	↓	↓
16	↓	↓	↓	↓	↓	↓

NO.	Sample container (enter code)	Sample Description (enter code)	Number of Containers and Preservation: Unpreserved	HNO3	HCL	H2SO4/H3PO4	Field Filtered (check)	Analysis Requested: See Note 1	See Note 2	TOC	DOC	TDS	8010/8020	HAA6 (full list)	Total phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	C	A	1					X									|		✓				
2	F	A		1					X								|		✓				
3	E	A				/				X							|		✓				
4	E	A				/					X						|		✓				
5	F	A	1									X					|		✓				
6	A	A			2								X				|		✓	✓			
7	E	A	1											X			|		✓				
8	F	A				/									X		|		✓				
9	C	A	1					X									|		✓				
10	F	A		1					X								|		✓				
11	E	A				/				X							|		✓				
12	E	A				/					X						|		✓				
13	F	A	1									X					|		✓				
14	A	A			2								X				|		✓	✓			
15	E	A	1											X			|		✓				
16	F	A		1											X		|		✓				

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.

2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14512, 13, 14	Thomas Murphy	9/28/09	1400		9/28/09	1400

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14514

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER [illegible] (SIGN)
SAMPLERS Henry Castio Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
(A.) 40-ml VOA Vial
(B.) Glass Liter
(C.) Plastic 500-ml
(D.) Plastic Liter
(E.) ~~Brass Tube~~ 250 poly
(F.) Other 250 Amber glass

SAMPLE DESCRIPTION CODES
(A.) Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
(H.) Blank/Spike
I. Other

TAT CODES
(1.) Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HN0₃	HCL	H2SO4/H3PO4	Field Filtered (check) NaOH	See Note 1	See Note 2	TOC/DOC	TDS	8010/8020	HAA6 full list	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	9-28-09	1000	Source	22.5	1226	7.99	D	A	1					X											✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X										✓				
3	↓	↓	↓	↓	↓	↓	F	A				✓				X									✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X								✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X							✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X						✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X					✓				
8	↓	↓	↓	↓	↓	↓	D	A	1												X				✓				
9	↓	↓	↓	↓	↓	↓	C	A					1									X			✓				
10	↓	—	Temp Blank	—	—	—	A	H	1															*	✓	N/A	*		
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.

* Temp TO BE Measured & rec. upon receipt of samples at lab

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
[illegible]			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14512, 13, 15	Thomas Murphy	9/28/09	1400		9/28/09	1400

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14516

PROJECT NAME Reclaimed Water

PROJECT NUMBER 27011-07-4200

RECORDER Hyland (SIGN)

SAMPLERS Henry Castro Jr (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D. Plastic ~~Liter~~ 250 ml]
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO.

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED															
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND ~~micromhos/cm~~	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL		Field Filtered (check)	Bromide									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	9-28-09		08502E08D012		MW-1		D	A	1					X									1		✓				
2			08502E08D011		MW-2		D	A	1					X									1		✓				
3			08502E07A014		MW-3		D	A	1					X									1		✓				
4			08502E07A015		MW-4		D	A	1					X									1		✓				
5			~~L5 comp~~				D	A	1														1		✓				
6			~~L10 comp~~				D	A	1														1		✓				
7			Source				D	A	1					X									1		✓				
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4 °C

rec. tmp. ~~8.C~~ (I) 6.2 °C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
		9/28/09	1203

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	None		9/28/09			9/28/09	1203

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below)

Verbals Requested: Yes ☑ No ☐

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REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLE TEMP WHEN REC'D AT LAB: ____ (Compliance: 4 +/- 2°C)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___

SAMPLES CHECKED AGAINST COC BY:

SAMPLES LOGGED IN BY:

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: Locus Technologies

PROJECT CODE: 27011-07-7000

MWH LABS CLIENT CODE: Locus

COC ID:

SAMPLE GROUP:

SAMPLER PRINTED NAME AND SIGNATURE: H. Castro/T. Murphy/

TAT requested: rush by adv notice only

STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	Field Data Grab	Field Data Comp	NOMA	PFCs	EDTA	EPA525plus												SAMPLER COMMENTS
9-28-09	comp	LS Comp	IDT	RGW		X	0	0	0	0												
	comp	L10 Comp	↓	↓		X	1	1	0	0												
	900	MW-1	↓	↓	X		2	1	0	0												
	1050	MW-2	↓	↓	X		2	1	0	0												
	1155	MW-3	↓	↓	X		2	1	0	0												
	945	MW-4	↓	↓	X		2	1	0	0												
	1000	Source	↓	↓	X		2	1	1	2												

* **MATRIX TYPES:** RSW = Raw Surface Water, RGW = Raw Ground Water, CFW = Chlor(am)inated Finished Water, FW = Other Finished Water, SEAW = Sea Water, WW = Waste Water, BW = Bottled Water, SW = Storm Water, SO = Soil, SL = Sludge, O = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		Henry Castro Jr	Locus Tech.	9-29-09	
RECEIVED BY:	Jane Henry	Jane Henry	MWH	9-29-09	12:25
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

CHAIN OF CUSTODY

www.EMLabPK.com

EMLab P&K

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Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * **(866) 888-6653**

LEVEL / WEATHER	Fog	Rain	Snow	Wind	Clear
None					
Light					
Moderate					
Heavy					

CONTACT INFORMATION

Company: Locus Technologies
Contact: Norman Wong
Phone: 650-960-1640
Address: 299 Fairchild Dr. MV.
Special Instructions:

PROJECT INFORMATION

Project ID: 27011-07-4200
Project Desc.: Recycled Water Study
Project Zip Code:
Sampling Date & Time: 9-28-09
PO Number:

TURN AROUND TIME CODES - (TAT)

STD - Standard (DEFAULT)
ND - Next Business Day
SD - Same Business Day Rush
WH - Weekend/Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	Description	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	NOTES (Time of day, Temp, RH, etc.)
MW-1		W	STD	1L	
MW-2		↓	↓	1L	
MW-3		↓	↓	1L	
MW-4		↓	↓	1L	
~~L5-Comp~~		↓	↓	150ml(Min)	
L10-Comp		↓	↓	150ml(Min)	
Source		↓	↓	1L	

REQUESTED SERVICES (√ Boxes)

	Non-Culturable				Culturable										Other Requests					
	Spore Trap		Tape Swab Bulk		BioCassette™, Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plate															
Sample ID	Fungi - Spore Trap Analysis	Spore Trap Analysis - Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain and Counts (Culturable Air and Surface Bacteria)	*Legionella* culture	Total Coliform, *E.coli* (Presence/Absence)	Membrane Filtration (Please specify organism)	MPN Bacteria (Please specify organism) E. Coli	QuantiTray - Sewage Screen	Asbestos Analysis - PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis - PLM (EPA method 600/R-93-116)	PCR (please specify test)	Total Fecal Coliforms	HPC	
MW-1													☒					☒	☒	
MW-2													☒					☒	☒	
MW-3													☒					☒	☒	
MW-4													☒					☒	☒	
~~L5-Comp~~													☒					☒	☒	
L10-Comp													☒					☒	☒	
Source													☒					☒	☒	

SAMPLE TYPE CODES

BC - BioCassette™	**ST** - Spore Trap: Zefon, Allergenco, Burkard...	**T** - Tape	**D** - Dust
A1S - Andersen		**SW** - Swab	[✓ **W** - Water]
SAS - Surface Air Sampler	**P** - Potable Water	**B** - Bulk	**SO** - Soil
CP - Contact Plate	**NP** - Non Potable Water	**O** - Other	

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
Pete Alison	9-28-09 12:40		9/28/09 1240

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html

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LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD/IDT
Field Activity: Well Sampling
Weather: clear

Project No.: 27011-07-4200
Date: 9-28-09
Logged by: A. Castudor
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
650	Loaded truck, equipment & coolers.
750	Arrived onsite. Checked in at lobby.
810	AT MW-1. Take DO reading & water level.
900	Sampled MW-1.
913	AT MW-4. Take DO reading & water level.
945	Sampled MW-4.
1000	AT MW-2. Take DO reading & water level.
1050	Sampled MW-2.
1105	AT MW-3. Take DO reading & water level.
1155	Sampled MW-3.
1220	Offloaded water into field.
1245	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 1
DATE 9-28-09
SAMPLE SOURCE A
PROJECT# 27011-07-4100
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: CONTINUOUS PUMPER ___ YES ___ NO pH meter ______ FLOW RATE ______
PUMP CYCLING ___ YES ___ NO METER READING ______

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 33.24 TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-33.24=11.76×1.96=23.04gal.
TIME PURGE BEGINS 830
ACTUAL AMOUNT PURGED 26.17gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
857	19.4	875	6.40	cloudy/no odor	190	1.64 mg/L
858	19.4	876	6.40	" " "	191	17.6%
859	19.4	876	6.41	" " "	190	

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 W/sample port SAMPLING TIME 900
DATE 9-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL -------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-3 PREVIOUSLY USED IN WELL ______
SITE IDT SITE ______
DECON METHOD/STEAM TIME Steam w/liq Jomax DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO I D ______ RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ___ NO ID ~~4927~~ QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.43 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 4
DATE 9-28-09
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter ______ FLOW RATE ______
METER READING ______

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 35.44 TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40
PURGE VOLUME CALCULATION 45 - 35.44 = 9.56 x 1.96 = 18.73 gal
TIME PURGE BEGINS 925
ACTUAL AMOUNT PURGED 20.43 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
942	15.8	879	6.60	Cloudy / no odor	97	1.07 mg/L
943	15.8	878	6.61	" / " "	98	9.8%
944	15.9	879	6.61	" " "	98	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/sample port
SAMPLING TIME 945
DATE 9-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2
HOSE REEL -------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-1
PREVIOUSLY USED IN WELL ______
SITE IDT
SITE ______
DECON METHOD/STEAM TIME ______
DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO I D ______
RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ___ NO ID [illegible] QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.24 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 2
DATE 9-28-09
SAMPLE SOURCE A
PROJECT# 27011-07-4100
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: CONTINUOUS PUMPER YES NO pH meter FLOW RATE
PUMP CYCLING YES NO METER READING

WATER LEVEL INFORMATION

MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 31.25 TIME____ W.L. AFTER PURGE____ TIME____
W.L. FOR 80% RECOVERY____ W.L. TIME OF SAMPLE____ DATE____ TIME____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-31.25=13.75x1.96=26.95 gal
TIME PURGE BEGINS 1005
ACTUAL AMOUNT PURGED____
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1047	17.4	744	6.70	cloudy/no odor	72	2.4 mg/L
1048	17.3	745	6.72	" " "	72	27%
1049	17.3	745	6.72	" " "	72	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2
SAMPLING TIME 1050
DATE 9-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL ------ SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-4 PREVIOUSLY USED IN WELL____
SITE IDT SITE____
DECON METHOD/STEAM TIME____ DECON METHOD/STEAM TIME____
RINSEATE SAMPLE____YES____NO I D____ RINSEATE SAMPLE____YES____NO ID____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK___YES___NO ID [illegible] QA/QC SPIKE___YES X NO ID ------
DUPLICATE___YES X NO ID ------ FIELD BLANK___YES X NO ID ------ INTER-LAB SPLIT___YES X NO ID ----

NOTES

CHLORINE: 1.72 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW- 3
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny
SITE: IDT
DATE 9-28-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER YES NO
PUMP CYCLING YES NO
pH meter
METER READING
FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE 32.72 TIME
W.L. AFTER PURGE
TIME
W.L. FOR 80% RECOVERY
W.L. TIME OF SAMPLE
DATE
TIME

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45 - 32.72 = 12.28 × 1.96 = 24.06 gal.
TIME PURGE BEGINS
ACTUAL AMOUNT PURGED 27.17 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1152	16.0	962	6.40	Cloudy/no odor	97	2.65mg/L
1153	16.0	963	6.41	" " "	97	13.2%
1154	16.0	965	6.41	" " "	98	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 w/ Sample port
SAMPLING TIME 1155
DATE 9-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2
HOSE REEL -------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-2
PREVIOUSLY USED IN WELL
SITE IDT
SITE
DECON METHOD/STEAM TIME
DECON METHOD/STEAM TIME
RINSEATE SAMPLE YES NO ID
RINSEATE SAMPLE YES NO ID

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK YES NO ID [illegible]
QA/QC SPIKE YES X NO ID ------
DUPLICATE YES X NO ID ------
FIELD BLANK YES X NO ID ------
INTER-LAB SPLIT YES X NO ID ----

NOTES

CHLORINE: 0.24mg/L

Locus

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: IDT SAMPLING
Weather:

Project No.: 27011-07-4200
Date: 9/28/09
Logged by: T. MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0800	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY.
0815	BEGIN COLLECTING COMPOSITE SAMPLES.
	L1-5 220ml L1-10 1365 ml
	L2-5 805 ml L2-10 1000 ml
	L3-5 0 L3-10 0
	L4-5 70 ml L4-10 0
	ALL LYSIMETERS WERE RECHARGED TO 15" hg
1000	COLLECT SOURCE SAMPLE.
1020	FILLING BOTTLES FOR L5 & L10 COMP.
	L5 ~~SKI~~ NOT ENOUGH WATER FOR:
	- HPC, TOTAL & FECAL COLIFORMS, E. COLI
	- NDMA
	- PFC's
	- TOTAL PHOSPHATE
	- BROMIDE
	L10 NOT ENOUGH WATER FOR
	- BROMIDE
1145	DEPART FOR SCVWD LAB TO DELIVER BROMIDE SAMPLES.
1245	RETURN TO MV OFFICE.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION LS-COMP

SAMPLE SOURCE A

AMBIENT CONDITIONS Clear & Sunny

SITE: IDT

DATE 9-28-09

PROJECT# 27011-07-4200

SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD

CONTINUOUS PUMPER ___ YES ___ NO

PUMP CYCLING ___ YES ___ NO

pH meter

METER READING

FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC

INSTRUMENT USED SJ-1

N/A

W.L. BEFORE PURGE ______ TIME ______ W.L. AFTER PURGE ______ TIME ______

W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2

N/A

WELL DEPTH ______ DIAMETER 4" #CASING VOLUMES (PROTOCOL) 3

SCREENED INTERVAL ------ PUMP SETTING ______

PURGE VOLUME CALCULATION ______

TIME PURGE BEGINS ______ ACTUAL AMOUNT PURGED ______ pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
COMP	21.4	2045	7.28	CLEAR/NO ODOR	103	78.8% 6.98 mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A

SAMPLING DEVICE ID GRUND-2 SAMPLING TIME COMP DATE 9-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

N/A

PURGE DEVICE ID GRUND-2 HOSE REEL ------ SAMPLING DEVICE ID SAMPLE PORT

PREVIOUSLY USED IN WELL ______ PREVIOUSLY USED IN WELL ______

SITE ______ SITE ______

DECON METHOD/STEAM TIME ______ DECON METHOD/STEAM TIME ______

RINSEATE SAMPLE ___ YES ___ NO ID ______ RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ___ NO ID ~~[illegible]~~ QA/QC SPIKE ___ YES X NO ID ------

DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.12 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION L10-COMP
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny
SITE: IDT
DATE 9-28-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD:
CONTINUOUS PUMPER YES NO
PUMP CYCLING YES NO
pH meter:
FLOW RATE
METER READING

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE ____ TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____
N/A

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH ____
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING ____
PURGE VOLUME CALCULATION ____
TIME PURGE BEGINS ____
ACTUAL AMOUNT PURGED ____
N/A
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
COMP	21.2	1565	7.40	CLEAR/NO ODOR	96	71.0% 6.22 mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2
SAMPLING TIME ____
DATE 9-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2
HOSE REEL -------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____
PREVIOUSLY USED IN WELL ____
SITE ____
SITE ____
DECON METHOD/STEAM TIME ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO ID ____
RINSEATE SAMPLE ____ YES ____ NO ID ____
N/A

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ____ YES ____ NO ID ____
QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ____ YES X NO ID ------
FIELD BLANK ____ YES X NO ID ------
INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 0.08 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION SOURCE
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny

SITE: IDT
DATE 9-28-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: CONTINUOUS PUMPER YES NO PUMP CYCLING YES NO pH meter METER READING FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE ____ TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

N/A

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH ____ DIAMETER 4" #CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------ PUMP SETTING ____
PURGE VOLUME CALCULATION ____
TIME PURGE BEGINS ____ ACTUAL AMOUNT PURGED ____ pH INSTRUMENT ULTRA#312

N/A

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1000	23.5	1226	7.94	CLEAR/NO ODOR	124	75.9% 6.26 mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 SAMPLING TIME ____ DATE 9-28-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL -------- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____ PREVIOUSLY USED IN WELL ____
SITE ____ SITE ____
DECON METHOD/STEAM TIME ____ DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO ID ____ RINSEATE SAMPLE ____ YES ____ NO ID ____

N/A

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ___ NO ID [illegible] QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ____ YES X NO ID ------ FIELD BLANK ____ YES X NO ID ------ INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 0.12 mg/L

MWH Laboratories

750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 315720
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Rick Zimmer
Phone: 626-386-1157
PO #: B30-12470

The following samples were received from you on **September 30, 2009.** They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id			Sample Date
200909300030	L-10 Composite			28-Sep-2009 0000
	@NDMA_SPE	@PFC		
200909300031	MW-1			28-Sep-2009 0900
	@NDMA_SPE	@PFC		
200909300032	MW-2			28-Sep-2009 1050
	@NDMA_SPE	@PFC		
200909300033	MW-3			28-Sep-2009 1155
	@NDMA_SPE	@PFC		
200909300034	MW-4			28-Sep-2009 0945
	@NDMA_SPE	@PFC		
200909300035	Source			28-Sep-2009 1000
	@525PLUS EDTA	@NDMA_SPE	@PFC	

Test Description

@525PLUS -- Semivolatiles by GCMS

@NDMA_SPE -- Nitrosamines by GCMS

@PFC -- Perfluorinated compounds

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14538

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-7000

RECORDER (SIGN)

SAMPLERS MURPHY (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
A. 40-ml VOA Vial [✓ B.] Glass Liter C. Plastic 500-ml D. Plastic Liter E. Brass Tube [✓ F.] Other 125 poly	[✓ A.] Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment F. Oil G. Waste H. Blank/Spike I. Other ______	[✓ 1.] Standard 2. 48 Hour 3. 24 Hour 4. Other ______

ANALYTICAL LAB MWH

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO₃	HCL	THIO	Field Filtered (check)	ANALYSIS REQUESTED: NDMA	PFC								TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	10/19/09	COMP	L5 COMP	—	—	—	B	A				1		X									1		✓				
2		COMP	L5 COMP	—	—	—	F	A	1						X								1		✓				
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
	Dana Herrera	10/20/09	12:05

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	NO		10/20/09	1205			

Send Lab Results to (Name): NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14537

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS MURPHY (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
A. 40-ml VOA Vial B. Glass Liter C. Plastic 500-ml D. Plastic Liter E. Brass Tube [✓ F.] Other 250 poly	[✓ A.] Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment F. Oil G. Waste H. Blank/Spike I. Other	[✓ 1.] Standard 2. 48 Hour 3. 24 Hour 4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY
LAB PROJECT NO.

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION				ANALYSIS REQUESTED						
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	Field Filtered (check)	BROMIDE	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
TM ~~1~~	~~10/19/09~~	~~COMP~~	~~L5 COMP~~	~~—~~		~~—~~	~~F~~	~~A~~	~~1~~				~~X~~ TM	1		✓				
2	10/19/09	COMP	L10 COMP	—	—	—	F	A	1				X	1		✓				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

>10°C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
		10/19/09	1025

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	cooler	NO	Thomas Murphy	10/19/09	1030			

Send Lab Results to (Name): NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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REV. 6/02

CHAIN OF CUSTODY

www.EMLabPK.com

EMLab P&K

Cherry Hill, NJ: 1936 Olney Avenue, Cherry Hill, NJ 08003 * **(866) 871-1984**
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * **(866) 888-6653**

LEVEL	WEATHER	Fog	Rain	Snow	Wind	Clear
	None					
	Light					
	Moderate					
	Heavy					

CONTACT INFORMATION

Company: LOCUS TECHNOLOGIES
Contact: NORMAN WONG
Phone: 650-960-1640
Address: 299 FAIRCHILD DR, M.V. 94043
Special Instructions:

PROJECT INFORMATION

Project ID: 2704-07-4200
Project Desc.: Recycled Water Study
Project Zip Code:
Sampling Date & Time: 10/19/09
PO Number:

TURN AROUND TIME CODES - (TAT)

STD - Standard (DEFAULT)
ND - Next Business Day
SD - Same Business Day Rush
WH - Weekend/Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

Sample ID	**Description**	**Sample Type** (Below)	**TAT** (Above)	**Total Volume/Area** (as applicable)	**NOTES** (Time of day, Temp, RH, etc.)
L5 comp		W	STD	100ml (min)	

REQUESTED SERVICES (√ Boxes)

	Non-Culturable				Culturable										Other Requests					
	Spore Trap		Tape Swab Bulk		BioCassette™, Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plate															
Sample ID	Fungi - Spore Trap Analysis	Spore Trap Analysis - Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain and Counts (Culturable Air and Surface Bacteria)	*Legionella* culture	Total Coliform, *E.coli* (Presence/Absence)	Membrane Filtration (Please specify organism)	MPN Bacteria (Please specify organism) E. coli	QuantiTray - Sewage Screen	Asbestos Analysis - PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis - PLM (EPA method 600/R-93-116)	PCR (please specify test)	TOTAL FECAL COLIFORMS	HPC	
L5 comp													X					X	X	

SAMPLE TYPE CODES

BC - BioCassette™	**ST** - Spore Trap: Zefon, Allergenco, Burkard...	**T** - Tape	**D** - Dust
A1S - Andersen		**SW** - Swab	**W** - Water
SAS - Surface Air Sampler	**P** - Potable Water	**B** - Bulk	**SO** - Soil
CP - Contact Plate	**NP** - Non Potable Water	**O** - Other	

RELINQUISHED BY	**DATE & TIME**	**RECEIVED BY**	**DATE & TIME**
	10-19-09 11:00		10/19/09 1100

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html

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Locus

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: IOT LYSIMETER SAMPLING
Weather:

Project No.: 27011.07.4200
Date: 10/19/09
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0800	ON SITE AT IOT CAMPUS. CHECK IN WITH SECURITY.
	BEGIN COLLECTING COMPOSITE SAMPLES FROM LYSMETERS.
	L3-5 0 ml
	-10 0 ml
	L4-5 80 ml
	-10 0 ml
	L2-5 780 ml
	L2-10 80 ml (didn't take it all)
	L1-5 350 ml
	-10 40 ml (didn't take it all)
0915	FILLING BOTTLES.
	HAVE ENOUGH TO COMPLETE L10 COMP BROMIDE SAMPLE.
	FOR L5 COMP I HAVE ENOUGH FOR HPC, TOTAL & FECAL COLIFORMS,
	E. COLI, NDMA, AND PFC'S. CANNOT FILL ~~TOTAL PHOSPHATE~~
	AND BROMIDE.
	↓ Done on 9/28
	CALL NORMAN.
1010	DEPART FOR SCVWD LAB.

Comments/Remarks:

MV\I:\SAMPLING\Dailylog\3/23/01

MWH Laboratories

750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 317357
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Yolanda.O.Martin
Phone: 626-386-1104
PO #: B30-12470

The following samples were received from you on **October 20, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Sample Date
200910200331	L-5 Composite	19-Oct-2009 00:00
	@NDMA_SPE @PFC	

Test Description

@NDMA_SPE -- Nitrosamines by GCMS

@PFC -- Perfluorinated compounds

Reported: 10/21/09

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14579

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER [illegible] (SIGN)

SAMPLERS Henry Castroir (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E.] ~~Brass Tube~~ 250 poly
[✓ F. Other] 250ml Amber glass

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. ________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO$_3$	HCL	H2SO4/H3PO4	Field Filtered (check)	ANALYSIS REQUESTED: See Note 1	See Note 2	TOC/DOC	TDS	8010/8020	HAA6 Full List	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12-14-09	0920	MW-1	15.9	820	661	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				[illegible]				X							1		✓				
4							E	A	1								X						1		✓				
5							A	A			3							X					1		✓	✓			
6							B	A	1										X				1		✓				
7							E	A				1								X			1		✓				
8		1045	MW-2	16.9	717	690	D	A	1					X									1		✓				
9							C	A		1					X								1		✓				
10							F	A				1				X							1		✓				
11							E	A	1								X						1		✓				
12							A	A			3							X					1		✓	✓			
13							B	A	1										X				1		✓				
14							E	A				1								X			1		✓				
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp. [illegible]

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14580,81,8284		12/14/09	1500		12/14/09	1500

Send Lab Results to (Name): Wes Hawthorne CC Norman Works (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ OTHER ________________ TEL ________ FAX ________

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14580

PROJECT NAME Recycled Water Study

SAMPLERS Henry Castillo Jr (PRINT)

(SIGN)

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- [✓ A. 40-ml VOA Vial]
- [✓ B. Glass Liter]
- [✓ C. Plastic 500-ml]
- [✓ D. Plastic Liter]
- [✓ E. ~~Brass Tube~~ 250ml poly]
- [✓ F. Other 250 ml Amber glass]

SAMPLE DESCRIPTION CODES
- [✓ A. Ground Water]
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other ______

TAT CODES
- [✓ 1. Standard]
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4/Ascorbic	Field Filtered (check)	See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6 full list	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12-14-09	1250	MW-3	15.8	998	6.65	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	F	A				1								X			1		✓				
8	↓	1145	MW-4	15.9	860	6.82	D	A	1					X									1		✓				
9	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
10	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
11	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
12	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
13	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
14	↓	↓	↓	↓	↓	↓	F	A				1								X			1		✓				
15																													
16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride
2. Boron, Calcium, Magnesium, Sodium, Potassium

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14579, 81, 82, 84		12/14/09	1500		12/14/09	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14581

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER Hey Cuy (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- (A.) 40-ml VOA Vial
- B. Glass Liter
- (C.) Plastic 500-ml
- D. Plastic Liter
- (E.) ~~Brass Tube~~ 250 Amber glass
- (F.) Other 250 ml poly

SAMPLE DESCRIPTION CODES
- (A.) Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other

TAT CODES
- (1.) Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO_3	HCL	H_2SO_4/H_3PO_4	Field Filtered (check)	ANALYSIS REQUESTED: See Note 1	See Note 2	TOC	DOC	TDS	8010/8020	HAA6 full list	Total Phosphate	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12-14-09	comp	L-5 comp	16.0	1789	7.23	C	A	1					X								1		✓				
2							F	A		1					X							1		✓				
3							E	A				1				X						1		✓				
4							E	A				1					X					1		✓				
5							F	A	1									X				1		✓				
6							A	A			2								X			1		✓	✓			
7							E	A	1											X		1		✓				
8							F	A				1									X	1		✓				
9			L-10 comp	14.7	1654	7.23	C	A	1					X								1		✓				
10							F	A		1					X							1		✓				
11							E	A					1			X						1		✓				
12							E	A					1				X					1		✓				
13							F	A	1									X				1		✓				
14							A	A			2								X			1		✓	✓			
15							E	A	1											X		1		✓				
16							F	A		1											X	1		✓				

NOTES / MISCELLANEOUS

Field / Container Temp.

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride

2, Boron, Calcium, Magnesium, Sodium, Potasium,

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature) Hey Cuy	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14579, 80, 284		12/14/09	1500		12/14/09	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD. • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14582

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER Hey Cas (SIGN)
SAMPLERS Henry Costio Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. ~~Brass Tube~~ 250 Poly
F. Other 250 ml Amber glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCl	H_2SO_4/H3Pol	Field Filtered (check) NaOH	See Note 1	See Note 2	TOC, DOC	TDS	5010/502 0	HAA6 Full List	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12-14-09	0930	Source	12.8	1179	7.41	D	A	1					X									1		✓	✓			
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							F	A	1								X						1		✓				
5							A	A			3							X					1		✓	✓			
6							B	A	1										X				1		✓				
7							E	A				1								X			1		✓				
8							D	A	1												X		1		✓				
9							C	A					1									X	1		✓				
10	↓	—	Temp Blank	—	—	—	A	H	1															*	✓	NA	*		
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.

Field / Container Temp.
* Temp to measured & rec. upon reciept of samples at lab
°C

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14579, 80, 81, 84		12/14/09	1500		12/14/09	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14583

PROJECT NAME Reclaimed Water
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS (PRINT) Henry Castro Jr
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D.] Plastic ~~Liter~~ 250 ml
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL	Field Filtered (check)	ANALYSIS REQUESTED Bromide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12-14-09	0920	08S02E08D012		MW-1		D	A	1			X	X	1		✓				
2	|	1015	08S02E08D011		MW-2		D	A	1			X	X	1		✓				
3	|	1230	08S02E07A014		MW-3		D	A	1			X	X	1		✓				
4	|	1145	08S02E07A015		MW-4		D	A	1			X	X	1		✓				
5	|		~~LS COMP~~				~~D~~	~~A~~	~~1~~					1		✓				
6	|	COMP	L10 COMP				D	A	1				X	1		✓				
7	↓	0930	Source				D	A	1				X	1		✓				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	None		12/14/09	1250		12/14/09	1250

Send Lab Results to (Name): Wes Howthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ____ TEL ____ FAX ____

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

CHAIN OF CUSTODY

www.EMLabPK.com

EMLab P&K

Cherry Hill, NJ: 1936 Olney Avenue, Cherry Hill, NJ 08003 * **(866) 871-1984**
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * **(866) 888-6653**

	WEATHER	Fog	Rain	Snow	Wind	Clear
LEVEL	None					
	Light					
	Moderate					
	Heavy					

CONTACT INFORMATION

Company: Locus Technologies
Address: 299 Fairchild Dr. MV.
Contact: ~~Norman Wong~~ Norman Wong
Special Instructions:
Phone: 650-960-1640

PROJECT INFORMATION

Project ID: 37011-07-4300
Project Desc.: Recycled Water Study
Project Zip Code:
Sampling Date & Time: 12-14-09
PO Number:

TURN AROUND TIME CODES - (TAT)

[✓ **STD** - Standard (DEFAULT)]
ND - Next Business Day
SD - Same Business Day Rush
WH - Weekend/Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

SAMPLE ID	DESCRIPTION	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	NOTES (Time of day, Temp, RH, etc.)
MW-1		W	STD	1L	
MW-2		↓	↓	1L	
MW-3				1L	
MW-4				1L	
L5 COMP				150ml (Min)	
L10 COMP				150ml (Min)	
Source		↓	↓	1L	

REQUESTED SERVICES (✔ Boxes)

SAMPLE ID	Non-Culturable: Spore Trap: Fungi - Spore Trap Analysis	Spore Trap Analysis - Other particles	Tape Swab Bulk: Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	Culturable: BioCassette™ Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plate: 1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain and Counts (Culturable Air and Surface Bacteria)	*Legionella* culture	Total Coliform, *E.coli* (Presence/Absence)	Membrane Filtration (Please specify organism)	MPN Bacteria (Please specify organism) E. Coli	QuantiTray - Sewage Screen	Other Requests: Asbestos Analysis - PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis - PLM (EPA method 600/R-93-116)	PCR (please specify test)	Total Coliforms	HPC	
MW-1													X					X	X	
MW-2													X					X	X	
MW-3													X					X	X	
MW-4													X					X	X	
L5 COMP													X					X	X	
L10 COMP													X					X	X	
Source													X					X	X	

SAMPLE TYPE CODES

BC - BioCassette™
A1S - Andersen
SAS - Surface Air Sampler
CP - Contact Plate
ST - Spore Trap: Zefon, Allergenco, Burkard...
T - Tape
SW - Swab
B - Bulk
D - Dust
[✓ **W** - Water]
SO - Soil
O - Other:

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
AUSTIN	12-14-09 1330	Logan Tran	12/14/09 1326.

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html

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MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ____

SAMPLE TEMP WHEN REC'D AT LAB: ____ (Compliance: 4 +/- 2°C)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___

SAMPLES CHECKED AGAINST COC BY: ____

SAMPLES LOGGED IN BY: ____

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: Locus Technologies

PROJECT CODE: 27011-07-7000

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: Locus

COC ID:

SAMPLE GROUP:

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: H. Castro / T. Mujaby /

TAT requested: rush by adv notice only
STD ✓ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	Field Data Grab	Field Data Comp	NDMA	PFC's	EOTA	EPA 525 plus	SAMPLER COMMENTS
12/14/09	Comp	L5 Comp	IOT	RGW		X	1 ✓	0	0	0	
	Comp	L10 Comp				X	1 ✓	1 ✓	0	0	
		MW-1			X		2 ✓	1 ✓	0	0	
		MW-2			X		2 ✓	1 ✓	0	0	
		MW-3			X		2 ✓	1 ✓	0	0	
		MW-4			X		2 ✓	1 ✓	0	0	
	920	Source			X		2 ✓	1	1 ✓	2 ✓	

*** MATRIX TYPES:** RSW = Raw Surface Water [✓ RGW] = Raw Ground Water CFW = Chlor(am)inated Finished Water FW = Other Finished Water SEAW = Sea Water WW = Waste Water BW = Bottled Water SW = Storm Water SO = Soil SL = Sludge O = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		Henry Castro Jr	Locus Tech.	12-15-09	1210
RECEIVED BY:		June Herrera	MWH	12-15-09	1211
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ____

PAGE ____ OF ____

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD / FDT
Field Activity: Well Sampling
Weather: clear

Project No.: 27011-07-4200
Date: 12-14-09
Logged by: H. Castleston
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
730	Loaded truck.
810	Arrived onsite. Checked in at lobby.
825	AT MW-1. Take DO reading & water level.
920	Sampled MW-1.
1000	AT MW-2. Take DO reading & water level.
1045	Sampled MW-2.
1105	AT MW-4. Take DO reading & water level.
1145	Sampled MW-4.
1205	AT MW-3. Take DO reading & water level.
1250	Sampled MW-3.
1310	Offloaded water.
1340	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 1
DATE 12-14-09
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter
METER READING
FLOW RATE

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE ____ TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** C

PURGE DEVICE I.D. Jetsub
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45' - 30.91 = 14.09 x 1.96 = 27.61 gal.
TIME PURGE BEGINS ____
ACTUAL AMOUNT PURGED 30.14 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
917	15.9	830	6.60	Cloudy brown / no odor	182	1.47mg/L
918	15.9	830	6.60	" " "	182	15.4%
919	15.9	830	6.61	" " "	182	

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID Dedicated Jetsub w/ sample port
SAMPLING TIME 920
DATE 12-14-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID Jetsub HOSE REEL ------ SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL R-41B2 PREVIOUSLY USED IN WELL ____
SITE Raytheon SITE ____
DECON METHOD/STEAM TIME Steam w/ liq 30 min DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO I D ____ RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES X NO ID ___ QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.36 mg/L

MVI:\SAMPLING\Samplog\10/27/2008

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
DATE 12-14-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO/ T.Murphy

WELL\SAMPLE DESIGNATION MW- 2
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter
METER READING
FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE ______ TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45' - 29.19 = 15.81 × 1.96 = 30.98 gal
TIME PURGE BEGINS ______
ACTUAL AMOUNT PURGED 33.78 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1042	16.4	717	6.90	cloudy brown / no odor	74	1.92 mg/L
1043	16.4	717	6.91	" " " "	74	17.6%
1044	16.4	717	6.90	" " " "	74	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-1 w/ Dedicated Sample port
SAMPLING TIME 1045
DATE 12-14-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1
HOSE REEL -------
PREVIOUSLY USED IN WELL R-31A
SITE Raytheon
DECON METHOD/STEAM TIME Steam w/tia 30 min
RINSEATE SAMPLE ___ YES ___ NO I D ______

SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ______
SITE ______
DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES / NO ID —
QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID -----
FIELD BLANK ___ YES X NO ID ------
INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 1.67 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW- 3
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny
SITE: IDT
DATE 12-14-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD ____ CONTINUOUS PUMPER ___ YES ___ NO ___ pH meter ____ FLOW RATE ____
PUMP CYCLING ___ YES ___ NO ___ METER READING ____

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE ____ TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND- 3
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45' - 30.55 = 14.45 x 1.96 = 28.32 gal
TIME PURGE BEGINS ____
ACTUAL AMOUNT PURGED 36.40 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1247	15.7	948	6.64	cloudy / no odor	91	2.25 mg/L
1248	15.8	948	6.63	" " " "	91	12470
1249	15.8	948	6.63	" " "	91	

WATER SAMPLING INFORMATION MONITORING WELL SAMPLE METHOD D

SAMPLING DEVICE ID GRUND- 3 Dedicated / Sample port
SAMPLING TIME 1250
APPROXIMATE DEPTH OF GRAB N/A
DATE 12-14-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND- 3 HOSE REEL ------ SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL N/A PREVIOUSLY USED IN WELL ____
SITE NEW SITE ____
DECON METHOD/STEAM TIME ____ DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ___ YES ___ NO I D ____ RINSEATE SAMPLE ___ YES ___ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES X NO ID — QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.71 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION MW- 4
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny
SITE: IDT
DATE 12-14-09
PROJECT# 27011-07-4200
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter ___ FLOW RATE ___
METER READING ___

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE ___ TIME ___ W.L. AFTER PURGE ___ TIME ___
W.L. FOR 80% RECOVERY ___ W.L. TIME OF SAMPLE ___ DATE ___ TIME ___

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45' - 32.47 = 12.55 x 1.96 = 24.55 gal.
TIME PURGE BEGINS ___
ACTUAL AMOUNT PURGED 25.41 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1142	15.9	859	6.82	cloudy / no odor	89	1.14 mg/L
1143	15.9	860	6.82	" " "	89	10.47%
1144	15.9	860	6.83	" " "	89	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID Dedicated GRUND-2 w/ sample port
SAMPLING TIME 1145
DATE 12-14-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL ------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL COM-29A
PREVIOUSLY USED IN WELL ___
SITE OOU
SITE ___
DECON METHOD/STEAM TIME Steam w/H2O 30min
DECON METHOD/STEAM TIME ___
RINSEATE SAMPLE ___ YES ___ NO ID ___
RINSEATE SAMPLE ___ YES ___ NO ID ___

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES ✓ NO ID ___ QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.30 mg/L

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD

Field Activity: IDT SAMPLING

Weather:

Project No.: 27011-07-4200

Date: 12/14/09

Logged by: MURPHY

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0815	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY
0830	BEGIN COLLECTING COMPOSITE SAMPLES.
	L1-5 750ml L1-10 1500ml
	L2-5 1150ml L2-10 1480ml
	L3-5 0 L3-10 0
	L4-5 400ml L4-10 100ml
	ALL LYSIMETERS RECHARGED TO 15"hg.
0930	COLLECT SOURCE SAMPLE.
1000	FILLING BOTTLES FOR L5 & L10 COMP.
	L5 COMP NOT ENOUGH WATER FOR
	- PFC'S
	- TOTAL PHOSPHATE
	- BROMIDE
	* ONLY ANOTHER 150ml IS REQUIRED TO COMPLETE THIS
	ROUND.
1130	DEPART FOR SCVWD LAB TO DELIVER BROMIDE SAMPLES.
1240	RETURNING TO MV OFFICE.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
DATE 12-14-09
PROJECT# 27011-07-4200
SAMPLER ~~H.CASTRO~~/ T.Murphy

WELL\SAMPLE DESIGNATION L5-COMP
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter ___
METER READING
FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

N/A

W.L. BEFORE PURGE ____ TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

N/A

PURGE DEVICE I.D. GRUND-2
WELL DEPTH ____
SCREENED INTERVAL ------
PURGE VOLUME CALCULATION ____
TIME PURGE BEGINS ____
DIAMETER 4"
PUMP SETTING ____
ACTUAL AMOUNT PURGED ____
#CASING VOLUMES (PROTOCOL) 3
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
COMP	16.0	1788	7.73	CLEAR/NO ODOR	182	94.1% 10.28 mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

SAMPLING DEVICE ID —
SAMPLING TIME COMP
APPROXIMATE DEPTH OF GRAB N/A
DATE 12-14-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION

SEE COC

DECONTAMINATION INFORMATION

N/A

PURGE DEVICE ID GRUND-2
HOSE REEL -------
PREVIOUSLY USED IN WELL ____
SITE ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO I D ____

SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____
SITE ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___ YES X NO ID ____ QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ___ YES X NO ID ----- FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.11 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION L10-COMP
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny
SITE: IDT
DATE 12-14-09
PROJECT# 27011-07-4200
SAMPLER ~~H.CASTRO~~/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ___YES ___NO
PUMP CYCLING ___YES ___NO
pH meter
FLOW RATE
METER READING

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

N/A

W.L. BEFORE PURGE ______ TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD C

N/A

PURGE DEVICE I.D. GRUND-2
WELL DEPTH ______
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING ______
PURGE VOLUME CALCULATION ______
TIME PURGE BEGINS ______
ACTUAL AMOUNT PURGED ______
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
COMP	14.7	1634	7.23	CLEAR / NO ODOR	179	81.0% 8.88 mg/L

WATER SAMPLING INFORMATION MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID ~~GRUND-2~~ SAMPLING TIME COMP DATE 12-14-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

N/A

PURGE DEVICE ID GRUND-2 HOSE REEL ---- SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ______ PREVIOUSLY USED IN WELL ______
SITE ______ SITE ______
DECON METHOD/STEAM TIME ______ DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___YES ___NO I D ______ RINSEATE SAMPLE ___YES ___NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ___YES ✓ NO ID ---- QA/QC SPIKE ___YES X NO ID ------
DUPLICATE ___YES X NO ID ------ FIELD BLANK ___YES X NO ID ------ INTER-LAB SPLIT ___YES X NO ID ----

NOTES

CHLORINE: 1.05 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

WELL\SAMPLE DESIGNATION SOURCE
SAMPLE SOURCE A
AMBIENT CONDITIONS Clear & Sunny
SITE: IDT
DATE 12-14-09
PROJECT# 27011-07-4200
SAMPLER ~~H.CASTRO~~/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD: CONTINUOUS PUMPER __ YES __ NO pH meter __ FLOW RATE
PUMP CYCLING __ YES __ NO METER READING

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

N/A

W.L. BEFORE PURGE____ TIME____ W.L. AFTER PURGE____ TIME____
W.L. FOR 80% RECOVERY____ W.L. TIME OF SAMPLE____ DATE____ TIME____

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD C

N/A

PURGE DEVICE I.D. GRUND-2
WELL DEPTH____ DIAMETER 4" #CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------ PUMP SETTING____
PURGE VOLUME CALCULATION____
TIME PURGE BEGINS____ ACTUAL AMOUNT PURGED____ pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
0930	12.8	1179	7.41	CLEAR/ NO ODOR	174	17.4% 1.76mg/L

WATER SAMPLING INFORMATION MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID ~~GRUND-2~~ SAMPLING TIME 0930 DATE 12-14-09

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

N/A

PURGE DEVICE ID GRUND-2 HOSE REEL ------ SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL____ PREVIOUSLY USED IN WELL____
SITE____ SITE____
DECON METHOD/STEAM TIME____ DECON METHOD/STEAM TIME____
RINSEATE SAMPLE____YES____NO I D____ RINSEATE SAMPLE____YES____NO ID____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK__YES ✓ NO ID — QA/QC SPIKE__YES X NO ID ------
DUPLICATE__YES X NO ID ----- FIELD BLANK__YES X NO ID ------ INTER-LAB SPLIT__YES X NO ID ----

NOTES

CHLORINE: 1.26 mg/L

MWH Laboratories

750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 321459
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Yolanda.O.Martin
Phone: 626-386-1104
PO #: B30-12470

The following samples were received from you on **December 15, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id			Sample Date
200912150167	L-5 Composite			14-Dec-2009 00:00
	@NDMA_SPE			
200912150168	L-10 Composite			14-Dec-2009 00:00
	@NDMA_SPE	@PFC		
200912150169	MW-1			14-Dec-2009 09:20
	@NDMA_SPE	@PFC		
200912150170	MW-2			14-Dec-2009 10:45
	@NDMA_SPE	@PFC		
200912150171	MW-3			14-Dec-2009 12:50
	@NDMA_SPE	@PFC		
200912150172	MW-4			14-Dec-2009 11:45
	@NDMA_SPE	@PFC		
200912150173	Source			14-Dec-2009 09:30
	@525PLUS EDTA	@NDMA_SPE	@PFC	

Test Description

@525PLUS -- Semivolatiles by GCMS

@NDMA_SPE -- Nitrosamines by GCMS

@PFC -- Perfluorinated compounds

MWH Laboratories

MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY:

LOGIN COMMENTS: ____________________

SAMPLES CHECKED AGAINST COC BY: ____________

SAMPLES LOGGED IN BY: ____________

SAMPLE TEMP WHEN REC'D AT LAB: ________ (Compliance: 6°C or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ____ PARTIALLY FROZEN ____ THAWED ____

(check for yes) *(check for yes)*

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: LOCUS TECHNOLOGIES

SYSTEM #: 27011-07-7000

COMPLIANCE SAMPLES - Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE:

P.O.# / JOB # / PROJECT :

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE: T. MURPHY T. Murphy

TAT requested: rush by adv notice only

STD ✓ 1 week ____ 3 day ____ 2 day ____ 1 day ____

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	PFC's															SAMPLER COMMENTS
1/5/10	COMP	L5 COMP	L5COMP	RGW		✓	X															

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	1/6/10	12:55
RECEIVED BY:	Mr. Herring	Dave. Herring	MWH	1/7/10	12:55
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

Page 1

C-O-C# ______

PAGE ____ OF ____

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14595

PROJECT NAME SLVWD Recycled Water

PROJECT NUMBER 27011-4200

RECORDER T. Murphy (SIGN)

SAMPLERS T. MURPHY (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F.] Other 250 AMBER

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. ____________

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO$_3$	HCL	H2SO4	Field Filtered (check)	ANALYSIS REQUESTED: ~~Total Phosphate~~ cancelled									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1/5/10	COMP	LS COMP	—	—	—	F	A				1		X									1		✓				
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	NONE	Thomas Murphy	1/5/10	1400	Rudy	1/5/10	1400

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______________________ TEL ________ FAX ________

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LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14594

PROJECT NAME SCVWD Reclaimed Water

PROJECT NUMBER 27011-4200

RECORDER T. Murphy (SIGN)

SAMPLERS T. MURPHY (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
[✓ C. Plastic 500-ml]
D. Plastic Liter
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL		Field Filtered (check)	BROMIDE									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1/5/10	COMP	LS COMP ✓	—	—	—	C	A	1					X									1		✓				
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

t < 0°C slush.

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	NONE	Thomas Murphy	1/5/10			1/5/10	1050

Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD RECYCLED WATER STUDY
Field Activity: IDT LYSIMETER SAMPLING
Weather:

Project No.: 27011-4200
Date: 1/5/10
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0800	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY.
	ALL LYSIMETERS WILL BE RECHARGED TO 15" Hg.
0810	BEGIN COLLECTING SAMPLES FROM L5 LYSIMETERS
	L3-5 0
	L4-5 80 ml did not take it all
	L2-5 80 ml did not take it all
	L1-5 80 ml did not take it all
1000	DEPARTING FOR SCVWD LAB.
1050	DROP OFF BROMIDE SAMPLE.
1130	RETURN TO MV OFFICE.

Comments/Remarks:

MWH Laboratories
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 322967
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Yolanda.O.Martin
Phone: 626-386-1104
PO #: B30-12470

The following samples were received from you on **January 07, 2010**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Sample Date
201001070139	L-5 Composite	05-Jan-2010 00:00
	@PFC	

Test Description

@PFC -- Perfluorinated compounds

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14613

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLERS Henry Castro Jr. (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E. ~~Brass Tube~~] 250 poly
[✓ F. Other] 500ml glass

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ____

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ____

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. ____

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO$_3$	HCL	H$_2$SO$_4$	Field Filtered (check)	See note 1	See note 2	TOC, DOC	TDS	8010/502-0	HAA+Bromochloroacetic acid	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3-1-10	915	MW-1	15.8	847	6.65	D	A	1					X											✓				
2							C	A		1					X										✓				
3							F	A				1				X									✓				
4							E	A	1								X								✓				
5							A	A			3							X							✓	✓			
6							B	A	1										X						✓				
7		↓	↓	↓	↓	↓	E	A				1								X					✓				
8		1020	MW-2	16.2	721	6.88	D	A	1					X											✓				
9							C	A		1					X										✓				
10							F	A				1				X									✓				
11							E	A	1								X								✓				
12							A	A			3							X							✓	✓			
13							B	A	1										X						✓				
14	↓	↓	↓	↓	↓	↓	E	A				1								X					✓				
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	146-14, 15, 16, 17		3/1/10	1430		3/1/10	1430

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ____ TEL ____ FAX ____

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14614

PROJECT NAME Recycled water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
(A.) 40-ml VOA Vial
(B.) Glass Liter
(C.) Plastic 500-ml
(D.) Plastic Liter
(E.) ~~Brass Tube~~ 250 poly
(F.) Other 500ml glass

SAMPLE DESCRIPTION CODES
(A.) Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
(1.) Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	See note 1	See note 2	TOC/DOC	TDS	8010/8020	See note 3	Total Phosphorus			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3-1-10	1205	MW-3	16.1	940	6.59	D	A	1					X											✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X										✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X									✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X								✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X							✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X						✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X					✓				
8	↓	1115	MW-4	16.0	850	6.79	D	A	1					X											✓				
9	↓	↓	↓	↓	↓	↓	C	A		1					X										✓				
10	↓	↓	↓	↓	↓	↓	F	A				1				X									✓				
11	↓	↓	↓	↓	↓	↓	E	A	1								X								✓				
12	↓	↓	↓	↓	↓	↓	A	A			3							X							✓	✓			
13	↓	↓	↓	↓	↓	↓	B	A	1										X						✓				
14	↓	↓	↓	↓	↓	↓	E	A				1								X					✓				
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate + chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.
3. HAA 6 full list + Bromochloroacetic acid.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	146-13, 15, 16, 17	Thomas Murphy	3/1/10	1430		3/1/10	1430

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14615

PROJECT NAME Recycled water Study

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLERS Henry Castro (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E. ~~Brass Tube~~ 250 poly]
[✓ F. Other 500 ml glass]

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H. Blank/Spike]
I. Other

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO$_3$	HCL	H2SO4	Field Filtered (check) NaOH	ANALYSIS REQUESTED: See note 1	See note 2	TOC/DOC	TDS	8010/6020	See note 3	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3-1-10	915	SOURCE	13.9	1233	7.34	D	A	1					X											✓				
2							C	A		1					X										✓				
3							F	A				1				X									✓				
4							E	A	1								X								✓				
5							A	A			3							X							✓	✓			
6							B	A	1										X						✓				
7							E	A				1								X					✓				
8							D	A	1												X				✓				
9							C	A					1									X			✓				
10		—	Temp Blank	—	—	—	A	H	1															*	✓	NA	*		
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.
3. HAA6 full list + Bromochloroacetic acid.

Field / Container Temp.
* Temp to be meas. & rec. upon receipt of samples at lab.
c°

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	146-13, 14, 16, 17		3/1/10	1430		3/1/10	1430

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below)

Verbals Requested: Yes ☐ No ☐

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☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14616

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER [illegible] (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
B. Glass Liter
[✓ C.] Plastic 500-ml
D. Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 Amber glass
[✓ F.] Other 250ml Poly

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See note 1	See note 2	TOC	DOC	TDS	8010/8020	See note 3M	Total Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3-1-10	Comp	L5 Comp	16.2	2180	7.76	C	A	1					X									1		✓				
2							F	A		1					X								1		✓				
3							E	A				1				X							1		✓				
4							E	A				1					X						1		✓				
5							F	A	1									X					1		✓				
6							A	A			2								X				1		✓	✓			
7							E	A	1											X			1		✓				
8							F	A				1									X		1		✓				
9			L10 Comp	15.1	1689	7.10	C	A	1					X									1		✓				
10							F	A		1					X								1		✓				
11							E	A				1				X							1		✓				
12							E	A				1					X						1		✓				
13							F	A	1									X					1		✓				
14							A	A			2								X				1		✓	✓			
15							E	A	1											X			1		✓				
16							F	A				1									X		1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.
3. HAA6 full list + Bromochloroacetic acid.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	146-13, 14, 15, 17	Thomas Murphy	3/1/10	1430		3/1/10	1430

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14617

PROJECT NAME Recycled water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- (A) 40-ml VOA Vial
- (B) Glass Liter
- (C) Plastic 500-ml
- (D) Plastic Liter
- (E) Brass Tube 250 poly
- (F) Other 500 ml Strst

SAMPLE DESCRIPTION CODES
- (A) Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- (H) Blank/Spike
- I. Other ______

TAT CODES
- (1) Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	See note 1	See note 2	TOC, DOC	TDS	8010/8020	See note 3	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3-1-10	—	5042	—	—	—	D	H	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	H		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	H				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	H	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	H			3							X					1		✓	✓			
6	↓	↓	↓	↓	↓	↓	B	H	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	E	H				1								X			1		✓				
8	↓	—	5043	—	—	—	D	A	1					X									1		✓				
9	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
10	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
11	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
12	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
13	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
14	✓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkality, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.
3. HAA6 full list + Bromochloroacetic acid.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	146-13, 14, 15, 16		3/1/10	1430		3/1/10	1430

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14618

PROJECT NAME Reclaimed Water
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)

SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
[✓ C. Plastic 500-ml]
[✓ D. Plastic ~~Liter~~ 250 ml]
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO3	HCL		Field Filtered (check)	ANALYSIS REQUESTED Bromide								TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3-1-10	0915	08502E08D012		MW-1		D	A	1					X								1		✓				
2	|	1020	08502E08D011		MW-2		D	A	1					X								1		✓				
3	|	1305	08502E07A014		MW-3		D	A	1					X								1		✓				
4	|	1115	08502E07A015		MW-4		D	A	1					X								1		✓				
5	|		~~E5 comp~~				D	A	1					X								1		✓				
6	|		~~E10-comp~~				D	A	1					X								1		✓				
7	|	0915	Source				D	A	1					X								1		✓				
8	|	—	5042				D	A	1					X								1		✓				
9	|	—	5043				D	A	1					X								1		✓				
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	None		3/2/10	0900		3/2/10	0900

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF COFUSTODY RECORD

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: ______

SAMPLES LOGGED IN BY: ______

SAMPLE TEMP WHEN REC'D AT LAB: ______ (Compliance: 6°C or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

MWH LABS CLIENT CODE: Locus

P.O.# / JOB # / PROJECT : 27011-07-7000

SAMPLER PRINTED NAME AND SIGNATURE: H. Carlio / T. Murphy

TAT requested: rush by adv notice only
STD X 1 week ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES ☐
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP		NDMA	PEGs	EDTA	EPA525+										SAMPLER COMMENTS
3-1-10		L5 comp	IDT	RGW		X		[illegible]	1	0	0										
↓		L10 comp	↓	↓		X		1	1	0	0										
↓		Mw-1	↓	↓	X			2	1	0	0										
↓		Mw-2	↓	↓	X			2	1	0	0										
↓		Mw-3	↓	↓	X			2	1	0	0										
↓		Mw-4	↓	↓	X		✓	2	1	0	0										
↓		Source	↓	↓	X		✓	2	1	1	2✓										
↓		5042	↓	↓	X			2	1	0	0										
↓		5043	↓	↓	X			2	1	0	0										

* MATRIX TYPES:

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		Henry Carlio	Locus Tech.	3-2-10	1250
RECEIVED BY:		Angel Cardona	MWH / Redline Courier Serv	3-2-10	12:50
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

CHAIN OF CUSTODY

www.EMLabPK.com

EMLab P&K

Cherry Hill, NJ: 1936 Olney Avenue, Cherry Hill, NJ 08003 * **(866) 871-1984**
Phoenix, AZ: 1501 West Knudsen Drive, Phoenix, AZ 85027 * **(800) 651-4802**
San Bruno, CA: 1150 Bayhill Drive, #100, San Bruno, CA 94066 * **(866) 888-6653**

WEATHER	Fog	Rain	Snow	Wind	Clear
LEVEL None					
Light					
Moderate					
Heavy					

CONTACT INFORMATION

Company: Locus Technologies
Contact: Norman Wong
Phone: 650-960-1640
Address: 299 Fairchild Dr., MV, Ca. 94043
Special Instructions:

PROJECT INFORMATION

Project ID: 27011-07-4200
Project Desc.: Recycled water Study
Project Zip Code:
Sampling Date & Time: 3-1-10
PO Number:

TURN AROUND TIME CODES - (TAT)

STD - Standard (DEFAULT)
ND - Next Business Day
SD - Same Business Day Rush
WH - Weekend/Holiday

Rushes received after 2pm or on weekends, will be considered received the next business day. Please alert us in advance of weekend analysis needs.

SAMPLE ID	DESCRIPTION	Sample Type (Below)	TAT (Above)	Total Volume/Area (as applicable)	NOTES (Time of day, Temp, RH, etc.)
Mw-1		W	STD	1L	
Mw-2		W		1L	
Mw-3		W		1L	
Mw-4		W		1L	
L5-Comp		W		150ml (Min)	
L10-Comp		W		150ml (Min)	
Source		W		1L	
5042		W		1L	
5043		W	↓	1L	

REQUESTED SERVICES (✔ Boxes)

SAMPLE ID	Non-Culturable				Culturable										Other Requests				
	Spore Trap		Tape Swab Bulk		BioCassette™ Andersen, SAS, Swab, Water, Bulk, Dust, Soil, Contact Plate														
	Fungi - Spore Trap Analysis	Spore Trap Analysis - Other particles	Direct Microscopic Exam (Qualitative)	Quantitative Spore Count Direct Exam	1-Media Surface Fungi (Genus ID + *Asp.* spp.)	2-Media Surface Fungi (Genus ID + *Asp.* spp.)	3-Media Surface Fungi (Genus ID + *Asp.* spp.)	Culturable Air Fungi (Genus ID + *Asp.* spp.)	Gram Stain and Counts (Culturable Air and Surface Bacteria)	*Legionella* culture	Total Coliform, *E.coli* (Presence/Absence)	Membrane Filtration (Please specify organism)	MPN Bacteria (Please specify organism) E. Coli	QuantiTray - Sewage Screen	Asbestos Analysis - PCM Airborne Fiber Count (NIOSH 7400)	Asbestos Analysis - PLM (EPA method 600/R-93-116)	PCR (please specify test)	Total Fecal Coliforms	HPC
Mw-1													X					X	X
Mw-2													X					X	X
Mw-3													X					X	X
Mw-4													X					X	X
L5-Comp													X					X	X
L10-Comp													X					X	X
Source													X					X	X
5042													X					X	X
5043													X					X	X

SAMPLE TYPE CODES

BC - BioCassette™
A1S - Andersen
SAS - Surface Air Sampler
CP - Contact Plate
ST - Spore Trap: Zefon, Allergenco, Burkard...
T - Tape
SW - Swab
B - Bulk
D - Dust
[✓ W - Water]
SO - Soil
O - Other:

RELINQUISHED BY	DATE & TIME	RECEIVED BY	DATE & TIME
	3-1-10 1318	Nhan Tran	3/1/10 1318

By submitting this Chain of Custody, you agree to be bound by the terms and conditions set forth at www.emlabpk.com/terms.html

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Locus TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD/IDT

Field Activity: Well Sampling

Weather:

Project No.: 27011-07-4200

Date: 3-1-10

Logged by: A. Castro Jr

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
730	Loaded truck.
800	Arrived onsite. Checked in at front desk.
825	AT MW-1. Take DO reading & water level.
915	Sampled MW-1.
940	AT MW-2. Take DO reading & water level.
1020	Sampled MW-2.
1035	AT MW-4. Take DO reading & water level.
1115	Sampled MW-4.
1130	AT MW-3. Take DO reading & water level.
1205	Sampled MW-3.
1230	Offloaded water.
1310	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW-1
DATE 3-1-10
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD____ CONTINUOUS PUMPER____YES____NO PUMP CYCLING____YES____NO pH meter________ FLOW RATE________ METER READING________

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE________TIME________ W.L. AFTER PURGE________ TIME________
W.L. FOR 80% RECOVERY________ W.L. TIME OF SAMPLE________ DATE________ TIME________

MONITORING WELL PURGE INFORMATION **MONITORING WELL PURGE METHOD** C

PURGE DEVICE I.D. Jetsub
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL -----
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-26.62 = 18.38 X 1.96 = 36.02 gal
TIME PURGE BEGINS________
ACTUAL AMOUNT PURGED 43.31 gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
913	15.7	847	6.64	cloudy brown / no odor	176	1.24 mg/l
913	15.8	847	6.65	" " " "	177	13.8%
914	15.8	847	6.65	" " " "	177	

WATER SAMPLING INFORMATION **MONITORING WELL SAMPLE METHOD** D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID Dedicated Jetsub w/ sample port SAMPLING TIME 915 DATE 3-1-10

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID Jetsub HOSE REEL ------ SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL MW-1 PREVIOUSLY USED IN WELL________
SITE IDT SITE________
DECON METHOD/STEAM TIME Steam w/ liq 30 min DECON METHOD/STEAM TIME________
RINSEATE SAMPLE____YES____NO ID________ RINSEATE SAMPLE____YES____NO ID________

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ✓ YES____NO ID 6042 QA/QC SPIKE____YES X NO ID ------
DUPLICATE____YES X NO ID ----- FIELD BLANK____YES X NO ID ----- INTER-LAB SPLIT____YES X NO ID ----

NOTES

CHLORINE: 0.27 mg/l

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW-2
DATE 3-1-10
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER YES NO
PUMP CYCLING YES NO
pH meter
METER READING
FLOW RATE

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE ____ TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-1
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-24.20 = 20.8×1.96 = 40.76gal
TIME PURGE BEGINS ____
ACTUAL AMOUNT PURGED 43.22gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1017	16.2	720	6.87	cloudy brown/no odor	78	1.71mg/L
1018	16.2	721	6.88	" " " "	78	15.8%
1019	16.2	721	6.88	" " " "	78	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D
APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-1 W/ Dedicated sample port
SAMPLING TIME 1020
DATE 3-1-10

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-1
HOSE REEL -------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL 23A
PREVIOUSLY USED IN WELL ____
SITE NEC
SITE ____
DECON METHOD/STEAM TIME Steam w/Liq 30min
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO ID ____
RINSEATE SAMPLE ____ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ✓ YES ____ NO ID 5042 QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ____ YES X NO ID ------ FIELD BLANK ____ YES X NO ID ------ INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 0.33 mg/L

MW:\SAMPLING\Samplog\10/27/2008

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION MW- 3
DATE 3-1-10
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter ______ FLOW RATE ______
METER READING ______

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

W.L. BEFORE PURGE ______ TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-3
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45'-26.69=18.31×1.96=35.88gal
TIME PURGE BEGINS ______
ACTUAL AMOUNT PURGED 37.44gal
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1202	16.1	939	6.59	Cloudy/no odor	117	1.41mg/L
1203	16.1	940	6.59	" " "	117	9.72
1204	16.1	940	6.59	" " "	117	

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID Dedicated GRUND-3/w sample port
SAMPLING TIME 1205
DATE 3-1-10

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-3
HOSE REEL ------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL 05MW-10C
PREVIOUSLY USED IN WELL ______
SITE Mavde
SITE ______
DECON METHOD/STEAM TIME Steam w/ lio 30min
DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO I D ______
RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ✓ YES ___ NO ID S042 QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ---- FIELD BLANK ___ YES X NO ID ----- INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.56mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: **IDT**
WELL\SAMPLE DESIGNATION MW- 4
DATE 3-1-10
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ___ YES ___ NO
PUMP CYCLING ___ YES ___ NO
pH meter
METER READING
FLOW RATE

WATER LEVEL INFORMATION MEASURING POINT TOC INSTRUMENT USED SJ-1

W.L. BEFORE PURGE ______ TIME ______ W.L. AFTER PURGE ______ TIME ______
W.L. FOR 80% RECOVERY ______ W.L. TIME OF SAMPLE ______ DATE ______ TIME ______

MONITORING WELL PURGE INFORMATION MONITORING WELL PURGE METHOD C

PURGE DEVICE I.D. GRUND-2
WELL DEPTH 45'
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING 40'
PURGE VOLUME CALCULATION 45-28.13=16.87x1.96=33.06 gal
TIME PURGE BEGINS ______
ACTUAL AMOUNT PURGED ______
pH INSTRUMENT ULTRA#312

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
1112	16.0	849	6.78	cloudy / no odor	145	1.07mg/l
1113	16.0	850	6.79	" " "	144	9.7%
1114	16.0	850	6.79	" " "	144	

WATER SAMPLING INFORMATION MONITORING WELL SAMPLE METHOD D

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID GRUND-2 Dedicated w/ sample port
SAMPLING TIME 1115
DATE 3-1-10

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

PURGE DEVICE ID GRUND-2 HOSE REEL ------ SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL 5110A PREVIOUSLY USED IN WELL ______
SITE Kifer SITE ______
DECON METHOD/STEAM TIME Steam w/Liq 30min DECON METHOD/STEAM TIME ______
RINSEATE SAMPLE ___ YES ___ NO ID ______ RINSEATE SAMPLE ___ YES ___ NO ID ______

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ✓ YES ___ NO ID 5042 QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ---- FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.28 mg/l

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: IDT SAMPLING
Weather:

Project No.: 27011-07-4200
Date: 3/1/10
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0840	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY.
0900	BEGIN COLLECTING COMPOSITE SAMPLES.
	L1-5 200 ml L1-10 1100 ml
	L2-5 1150 ml L2-10 1300 ml
	L3-5 360 ml L3-10 0
	L4-5 860 ml L4-10 20 ml
	ALL LYSIMETERS RECHARGED TO 15" hg
0915	COLLECT SOURCE SAMPLE
1000	FILLING BOTTLES FOR L5 & L10 COMP.
	L5 COMP NOT ENOUGH WATER FOR
	- TOTAL PHOSPHATE
	- BROMIDE
	L10 COMP NOT ENOUGH WATER FOR
	- BROMIDE
1210	DEPART FOR MV OFFICE
3/2/10 0900	DELIVER BROMIDE SAMPLES TO SCVWD LAB.

Comments/Remarks:

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION L5-COMP
DATE 3-1-10
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD ____ CONTINUOUS PUMPER ___ YES ___ NO pH meter ____ FLOWRATE ____
PUMP CYCLING ___ YES ___ NO METER READING ____

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

N/A

W.L. BEFORE PURGE ____ TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

N/A

PURGE DEVICE I.D. GRUND-2
WELL DEPTH ____
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING ____
PURGE VOLUME CALCULATION ____
TIME PURGE BEGINS ____
ACTUAL AMOUNT PURGED ____
pH INSTRUMENT ULTRA#~~312~~ 309

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
comp	16.2	2180	7.76	Yellow / NO ODOR	124	91.2% 9.27 mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D
APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID ~~GRUND-2~~
SAMPLING TIME comp
DATE 3-1-10

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

N/A

PURGE DEVICE ID GRUND-2 HOSE REEL ------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____
PREVIOUSLY USED IN WELL ____
SITE ____
SITE ____
DECON METHOD/STEAM TIME ____
DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ___ YES ___ NO I D ____
RINSEATE SAMPLE ___ YES ___ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ✓ YES ___ NO ID 6042 QA/QC SPIKE ___ YES X NO ID ------
DUPLICATE ___ YES X NO ID ------ FIELD BLANK ___ YES X NO ID ------ INTER-LAB SPLIT ___ YES X NO ID ----

NOTES

CHLORINE: 0.25 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION L10-COMP
DATE 3-1-10
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD
CONTINUOUS PUMPER ____ YES ____ NO
PUMP CYCLING ____ YES ____ NO
pH meter ____
METER READING ____
FLOW RATE ____

WATER LEVEL INFORMATION

MEASURING POINT TOC
INSTRUMENT USED SJ-1

N/A

W.L. BEFORE PURGE ________ TIME ________ W.L. AFTER PURGE ________ TIME ________
W.L. FOR 80% RECOVERY ________ W.L. TIME OF SAMPLE ________ DATE ________ TIME ________

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

N/A

PURGE DEVICE I.D. GRUND-2
WELL DEPTH ________
DIAMETER 4"
#CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------
PUMP SETTING ________
PURGE VOLUME CALCULATION ________
TIME PURGE BEGINS ________
ACTUAL AMOUNT PURGED ________
pH INSTRUMENT ULTRA#312 309

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
comp	15.1	1689	7.10	brown / no odor	137	88.8% 8.44mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD D
APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID ~~GRUND-2~~
SAMPLING TIME comp
DATE 3-1-10

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

N/A

PURGE DEVICE ID GRUND-2
HOSE REEL ------
SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ________
PREVIOUSLY USED IN WELL ________
SITE ________
SITE ________
DECON METHOD/STEAM TIME ________
DECON METHOD/STEAM TIME ________
RINSEATE SAMPLE ____ YES ____ NO I D ________
RINSEATE SAMPLE ____ YES ____ NO ID ________

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ✓ YES ____ NO ID 5042 QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ____ YES X NO ID ---- FIELD BLANK ____ YES X NO ID ----- INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 0.16 mg/L

LOCUS TECHNOLOGIES WATER SAMPLING LOG

SITE: IDT
WELL\SAMPLE DESIGNATION SOURCE
DATE 3-1-10
SAMPLE SOURCE A
PROJECT# 27011-07-4200
AMBIENT CONDITIONS Clear & Sunny
SAMPLER H.CASTRO/ T.Murphy

GRAB SAMPLE INFORMATION (use notes section for meter reading, flow rate, vol. purged etc.)

GRAB SAMPLE METHOD CONTINUOUS PUMPER YES NO pH meter FLOW RATE
PUMP CYCLING YES NO METER READING

WATER LEVEL INFORMATION

MEASURING POINT TOC INSTRUMENT USED SJ-1

N/A

W.L. BEFORE PURGE ____ TIME ____ W.L. AFTER PURGE ____ TIME ____
W.L. FOR 80% RECOVERY ____ W.L. TIME OF SAMPLE ____ DATE ____ TIME ____

MONITORING WELL PURGE INFORMATION

MONITORING WELL PURGE METHOD C

N/A

PURGE DEVICE I.D. GRUND-2
WELL DEPTH ____ DIAMETER 4" #CASING VOLUMES (PROTOCOL) 3
SCREENED INTERVAL ------ PUMP SETTING ____
PURGE VOLUME CALCULATION ____
TIME PURGE BEGINS ____ ACTUAL AMOUNT PURGED ____ pH INSTRUMENT ULTRA# ~~312~~ 309

TIME	TEMP.	COND.	pH	PURGE WATER APPEARANCE/ODOR	ORP	DO
~~Comp~~						
0930	13.9	1233	7.34	CLEAR/NO ODOR	149	72.6% 7.19 mg/L

WATER SAMPLING INFORMATION

MONITORING WELL SAMPLE METHOD ~~X~~ N/A

APPROXIMATE DEPTH OF GRAB N/A
SAMPLING DEVICE ID ~~GRUND-2~~ GRAB SAMPLING TIME ~~Comp~~ 0915 DATE 3-1-10

BOTTLE TYPE	NO.	VOLUME	ANALYSIS	LAB	PRESERVATION	FILTRATION
			SEE COC			

DECONTAMINATION INFORMATION

N/A

PURGE DEVICE ID GRUND-2 HOSE REEL ------ SAMPLING DEVICE ID SAMPLE PORT
PREVIOUSLY USED IN WELL ____ PREVIOUSLY USED IN WELL ____
SITE ____ SITE ____
DECON METHOD/STEAM TIME ____ DECON METHOD/STEAM TIME ____
RINSEATE SAMPLE ____ YES ____ NO I D ____ RINSEATE SAMPLE ✓ YES ____ NO ID ____

QA/QC INFORMATION

IN SAMPLE SHIPMENT: TRAVEL BLANK ✓ YES NA NO ID 6040 QA/QC SPIKE ____ YES X NO ID ------
DUPLICATE ✓ YES ~~X~~ NO ID 6043 FIELD BLANK ____ YES X NO ID ----- INTER-LAB SPLIT ____ YES X NO ID ----

NOTES

CHLORINE: 0.07 mg/L

MWH Laboratories
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 327287
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Yolanda.O.Martin
Phone: 626-386-1104
PO #: B30-12470

The following samples were received from you on **March 02, 2010**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id			Sample Date
201003020301	MW-1			01-Mar-2010 09:15
	@NDMA_SPE	@PFC		
201003020302	MW-2			01-Mar-2010 10:20
	@NDMA_SPE	@PFC		
201003020303	MW-3			01-Mar-2010 12:05
	@NDMA_SPE	@PFC		
201003020304	MW-4			01-Mar-2010 11:15
	@NDMA_SPE	@PFC		
201003020305	Source			01-Mar-2010 09:15
	@525PLUS EDTA	@NDMA_SPE	@PFC	
201003020308	L-5 Composite			01-Mar-2010 0000
	@NDMA_SPE	@PFC		
201003020309	L-10 Composite			01-Mar-2010 0000
	@NDMA_SPE	@PFC		
201003020311	5042 – trip blank			01-Mar-2010 0000
	@NDMA_SPE	@PFC		
201003020321	5043 – FD			01-Mar-2010 0000
	@NDMA_SPE	@PFC		

Test Description

@525PLUS -- Semivolatiles by GCMS
@NDMA_SPE -- Nitrosamines by GCMS
@PFC -- Perfluorinated compounds

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14627

PROJECT NAME SCVWD Recycled Water

PROJECT NUMBER 27011-07-4200

RECORDER T. Murphy (SIGN)

SAMPLERS T. Murphy (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F.] Other Poly [illegible]

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO3	HCL	H2SO4	Field Filtered (check)	ANALYSIS REQUESTED: Total Phosphate									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3/15/10	COMP	LS COMP	—	—	—	F	A				1		X									1						
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	NO	T. Murphy	3/15/10	1400		3/15/10	1400

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14626

PROJECT NAME SCVWD Recycled Water

PROJECT NUMBER 27011-07-4200

RECORDER T. Murphy (SIGN)

SAMPLERS T. MURPHY (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F.] Other plastic 250

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL		Field Filtered (check)	ANALYSIS REQUESTED BROMINE									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3/15/10	COMP	L5 COMP	—	—	—	F	A	1					X									1						
2		COMP	L10 COMP	—	—	—	F	A	1					X															
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Drop off	Cooler	NO	Thomas Murphy	3/15/10	1100		3/15/10	1100

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Recycled Water Study
Field Activity: IDT Lysimeter Sampling
Weather:

Project No.: 27011-07-4200
Date:
Logged by:
Page: of

TIME	DAILY ACTIVITIES AND EVENTS
0830	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY.
	I WILL BE EXTRACTING A MINIMUM AMOUNT OF WATER FROM EACH LYSIMETER IN ORDER TO COMPLETE THE LAST SAMPLING REQUIREMENTS.
	ALL LYSIMETERS WILL BE RECHARGED TO 15"Hg PER WES' REQUEST.
	L1-5 100 ml (THAT'S ALL THERE WAS)
	-10 250 ml
	L2-5 200 ml
	-10 250 ml
	L3-5 250 ml
	-10 0 (NO WATER AVAILABLE)
	L4-5 250 ml
	-10 0 (NO WATER AVAILABE)
1100	DELIVERED BROMIDE SAMPLES TO SCVWD LAB.
1150	RETURN TO MV OFFICE

Comments/Remarks:

APPENDIX III-D

RECHARGE LOGS

Locus TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: (IDT) Santa Clara Valley water district
Field Activity: Lysimeter testing
Weather: clear/hot

Project No.: 27011-07-4200
Date: 8-15-08
Logged by: H. Castro
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0815	Arrived onsite, checked in at front desk.
0830	AT L3. Attached hand pump to air lines & purged out water. Got 0 water out of one pump & 80 ML out of the other pump. Recharged air line's with 15^{+} Hg of vacuum.
0850	AT L4. Attached hand pump to air line's & purged out water. Got ½ liter out of one pump. & 80 ML out of the other pump. Recharged air line's with 15^{+} Hg of vaccum.
0915	AT L1. Attached hand pump to air line's & purged out water. Got ½ liter out of one pump & ½ liter out of the other pump. Recharged air lines with 15^{+} Hg of vaccum.
0935	AT L2. Attached hand pump to air line's & purged out water. Got ¾ liter out of one pump & ½ liter out of the other pump. Recharged air line's with 15^{+} Hg of vaccum.
0955	Turned in temp badge at office.
1005	Left site for office.
1035	Arrived at office.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: IDT - S.C. Valley water district

Field Activity: Lysimeter testing

Weather: clear

Project No.: 27011-07-4200

Date: 9-16-08

Logged by: A. Castro Jr.

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1330	Arrived onsite w/ TOM M. Checked in at front desk.
1340	AT L3. Attached vacuum gauge to L3-5 airline got 0 Hg. Attached bike pump to air line to purge out water. Got 0 water. Attached vacuum gauge to L3-10 airline got 0 Hg. Attached bike pump to air line to purge out water. Got 0 water. Did not recharge wells w/ Hg.
1400	AT L4. Attached Hg gauge to L4-5 airline got 4.5 Hg. Attached bike pump to air line to purge out water got approx. 300 ML. Recharged airline w/ 15" of Hg. Attached vacuum gauge to L4-10 airline got 0 Hg. Attached bike pump to air line to purge water. Got less than 40 ML. Did not recharge.
1420	AT L1. Attached Hg gauge to L1-5 airline got 0 Hg. Attached bike pump to airline to purge water. Got 0 water. Did not recharge well w/ Hg. Attached Hg gauge to L1-10 got 0 Hg. Attached bike pump to airline to purge water. Got approx. 500 ML. Recharged airline w/ 15" of Hg.
1435	AT L2. Attached Hg gauge to L2-5 airline got 2.5 Hg. Attached bike pump to airline to purge water. Got approx. 400 ML. Recharged airline w/ 15" of Hg. Attached Hg gauge to L2-10 airline got 1.5 Hg. Attached bike pump to airline to purge water. Got approx. 500 ML. Recharged airline w/ 15" of Hg.
1455	Turned in badges & left site.

Comments/Remarks:

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed water study
Field Activity: IOT Lysimeters
Weather: clear

Project No.: 27011-07-4200
Date: 9-26-08
Logged by: H. Castro
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1030	Arrived onsite. Checked in at front office.
	Onsite to check & recharge lysimeters vacuum.
	L1-5 has 2.0 in hg } Recharged to 15+ in hg.
	L1-10 has 4.1 in hg
	L2-5 has 3.5 in hg } Recharged to 15+ in. hg.
	L2-10 has 4.0 in hg
	L3-5 has 0 in hg } Lysimeters will not hold vacuum.
	L3-10 has 0 in hg
	L4-5 has 5 in hg } Recharged to 15+ in hg.
	L4-10 has 3.5 in hg
1155	Left site for office.

Comments/Remarks:

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD RECLAIMED WATER STUDY
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 10/3/08
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1200	ON SITE AT IDT TO CHECK AND RECHARGE LYSIMETER VACUUM. ALL LYSIMETERS WILL BE RECHARGED TO 15inhg regardless of residual vacuum.
	L1-5 has 2.0inhg
	L1-10 has 4.0inhg
	L2-5 has 3.5inhg
	L2-10 has 3.5inhg
	L3-5 has 0 inhg } THESE LYSIMETERS WILL NOT HOLD A
	L3-10 has 0 inhg } VACUUM FOR VERY LONG.
	L4-5 has 5.5inhg
	L4-10 has 2.0 inhg
1245	DEPARTING

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed water study
Field Activity: IOT Lysimeters
Weather: Clear

Project No.: 27011-07-4200
Date: 10-10-08
Logged by: H. Castro Jr.
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1330	Arrived onsite. Checked in at front desk.
	Onsite to check & recharge lysimeter vacuum.
	L1-5 has 2.5 in hg } Recharged to 15+ in hg.
	L1-10 has 4.0 in hg
	L2-5 has 3.8 in hg } Recharged to 15+ in hg.
	L2-10 has 2.9 in hg
	L3-5 has 0 in hg } Lysimeters will not hold Hg.
	L3-10 has 0 in hg
	L4-5 has 5.1 in hg } Recharged to 15+ in hg.
	L4-10 has 3.9 in hg
1445	Left site for office.

Comments/Remarks:

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD RECLAIMED WATER STUDY
Field Activity: IDT LYSIMETERS
Weather: SUNNY/WARM

Project No.: 27011-07-4200
Date: 10-17-08
Logged by: AUSTIN
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1000	ON SITE AT IDT TO CHECK AND RECHARGE LYSIMETER
	VACUUM. ALL LYSIMETERS WILL BE RECHARGED TO
	15 inhg REGARDLESS of RESIDUAL VACUUM.
	L1-5 has 1.0 inhg
	L1-10 has 1.5 inhg
	L2-5 has 2.5 inhg
	L2-10 has 1.0 inhg
	L3-5 has 0 inhg } THESE LYSIMETERS WILL NOT HOLD
	L3-10 has 0 inhg } A VACUUM FOR VERY LONG
	L4-5 has 5.5 inhg
	L4-10 has 4.0 inhg
11:15	DEPARTING SITE.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: LYSIMETER & SOURCE SAMPLING
Weather: COOL / HAZY

Project No.: 27011-07-4200
Date: 10/27/08
Logged by: MRoky
Page: 1 of

TIME	DAILY ACTIVITIES AND EVENTS
0630	PREP & LOAD TRUCK
0700	DEPART FOR IDT CAMPUS
0730	ON SITE. CHECK IN WITH SECURITY
0740	BEGIN COLLECTING COMPOSITE SAMPLES
	L2-5 1300 ml L2-10 1500 ml
	L1-5 ~~1400ml~~ 100ml L1-10 1400 ml
	L4-5 960 ml L4-10 50 ml
	L3-5 0 L3-10 0
1000	TAKE COMPOSITE SAMPLE PARAMETERS.
1145	COLLECT SOURCE SAMPLE & TAKE PARAMETERS.
1240	DEPART FOR MV OFFICE.
*	NOTE – ALL LYSIMETERS WERE RECHARGED TO 15" hg

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD RECLAIMED WATER STUDY
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-420D
Date: 11/7/08
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1000	ON SITE AT IDT TO CHECK AND RECHARGE LYSIMETERS. ALL
	LYSIMETERS WILL BE RECHARGED TO 15 in hg REGARDLESS OR
	CURRENT READING.
	L1-5 has 1.0 in hg
	L1-10 has 5.0 in hg
	L2-5 has 3.5 in hg
	L2-10 has 4.0 in hg
	L3-5 has 0 in hg (LYSIMETERS WILL NOT HOLD A
	L3-10 has 0 in hg (CHARGE
	L4-5 has 6.5 in hg
	L4-10 has 0 in hg - ? Depleted ?
1100	DEPARTING

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD

Field Activity: IDT LYSIMETERS

Weather:

Project No.: 27011-07-4200

Date: 11/14/08

Logged by: MURPHY

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0800	ON SITE AT IDT WITH PETE AUSTIN. PETE HAS DUG DOWN TO THE TOP OF L3-5 TO EXPOSE THE TUBING & FITTINGS. BOTH TEFLON TUBES HAVE BEEN DAMAGED IN THE PROCESS AND WILL NEED TO BE REPLACED.
	L3-5 LYSIMETER WILL NOT HOLD A VACUUM CHARGE EVEN WITH THE PUMP & GAUGE INSTALLED DIRECTLY TO THE LYSIMETER.
	I REPLACED THE TUBES AND FITTINGS. AFTER SPEAKING TO WES, WE FILLED IN THE HOLE.
	PETE WILL REMAIN ON SITE TO READ AND RECHARGE THE REST OF THE LYSIMETERS. ALL WILL BE RECHARGED TO 15" hg REGARDLESS OF RESIDUAL CHARGE.
	L1-5 = 0.5" hg
	-10 = 4.0" hg
	L2-5 = 3.5" hg
	-10 = 2.0" hg
	L4-5 = 6.5" hg
	-10 = 0.0" hg

Comments/Remarks:

LOCUS
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 11/24/08
Logged by: MMURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0900	ON SITE AT IDT TO COLLECT COMPOSITE SAMPLE FROM L5
	LYSIMETERS, AND TO CHECK AND RECHARGE ALL LYSIMETERS. ALL
	WILL BE CHARGED TO 15"hg REGARDLESS OF RESIDUAL CHARGE.
	L1-5 = 0"hg COLLECTED 40ml FOR COMPOSITE SAMPLE
	L1-10 = 2"hg
	L2-5 = 1.5"hg COLLECTED 40ml FOR COMPOSITE SAMPLE
	L2-10 = 0" hg
	L3-5 = 0"hg NO WATER } THESE LYSIMETERS WILL
	L3-10 = 0"hg NOT HOLD VACUUM
	L4-5 = 25"hg COLLECTED 40ml FOR COMPOSITE SAMPLE.
	L4-10 = 0" hg
1000	DEPARTING.
1025	DELIVER SAMPLE TO ACCUTEST LAB.

Comments/Remarks:

Locus TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: IDT LYSIMETERS
Weather: Sunny/cool

Project No.: 27011-07-4200
Date: 12-5-08
Logged by: AUSTIN/CASTRO
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1015	ON SITE AT IDT WITH HANK TO CHECK AND RECHARGE ALL LYSIMETERS. ALL WILL BE CHARGED TO 15"hg REGARDLESS OF RESIDUAL CHARGE.
	L1-5 = 1.6 hg
	L1-10 = 3.9 hg
	L2-5 = 2.0 hg
	L2-10 = 4.0 hg
	L3-5 = 0.0 hg
	L3-10 = 2.0 hg
	L4-5 = 7.8 hg
	L4-10 = 1.0 hg
1130	DONE - DEPARTING SITE

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: LYSIMETER & SOURCE SAMPLING
Weather: RAIN/CLOUDY/COLD

Project No.: 27011-07-4200
Date: 12/15/08
Logged by: Murphy
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0630	PREP & LOAD TRUCK
0645	DEPART FOR IDT SITE.
0720	ON SITE. CHECK IN WITH SECURITY
0745	BEGIN COLLECTING COMPOSITE SAMPLES
	L1-5 50 ml L1-10 1400
	L2-5 1100 ml L2-10 1400
	L3-5 0 L3-10 0
	L4-5 600 ml L4-10 20
	ALL LYSIMETERS WERE RECHARGED TO 15" hg
1000	BEGIN COLLECTING SOURCE SAMPLE. DUP/FB TAKEN HERE.
	SEE COC'S FOR COMPLETE DETAILS OF ANALYSES. NDMA WAS SKIPPED ON L-5 COMP & L-10 COMP DUE TO INSUFFICIENT AMOUNT OF WATER.
1300	DEPART FOR MV TO PREP SAMPLES FOR SHIPMENT & PICKUP.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 12/17/08
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0900	ON SITE AT IDT CAMPUS TO CHECK & RECHARGE LYSIMETERS. ALL LYSIMETERS WILL BE RECHARGED TO 15" hg regardless of residual Vacuum.
	L1-5 has 1.0" hg
	L1-10 has 5.5" hg
	L2-5 has 3.0" hg
	L2-10 has 2.5" hg
	L3-5 has 0
	L3-10 has 0
	L4-5 has 7.5" hg
	L4-10 has 0
1000	DEPARTING

Comments/Remarks:

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-4200
Date: 12/26/08
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1230	ON SITE AT IDT CAMPUS. TRIED TO CHECK IN WITH SECURITY. THE DOORS ARE LOCKED. NOBODY HERE
	ALL LYSIMETERS WILL BE RECHARGED TO 15" hg REGARDLESS OF RESIDUAL VACUUM.
	L1-5 3.0" hg
	L1-10 6.0" hg
	L2-5 2.0" hg
	L2-10 3.5" hg
	L3-5 0
	L3-10 0
	L4-5 8.5" hg
	L4-10 0.5" hg
1330	DEPARTING

Comments/Remarks:

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: ~~12~~ 1/2/09
Logged by: T. MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1240	ON SITE AT IDT TO CHECK/RECHARGE LYSIMERS. ALL
	WILL BE RECHARGED TO 15" hg REGARDLESS OF RESIDUAL
	VACUUM.
	L1-5 3.0" hg
	L1-10 5.0" hg
	L2-5 2.5" hg
	L2-10 3.5" hg
	L3-5 0
	L3-10 0
	L4-5
	7.0" hg
	L4-10 1.0" hg
1330	DEPARTING

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD

Field Activity: LYSIMETER & SOURCE SAMPLING

Weather: RAIN / COLD

Project No.: 27011-07-4200

Date: 1/5/09

Logged by: T. MURPHY

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1000	ON SITE AT IOT CAMPUS. CHECK IN WITH SECURITY.
1020	BEGIN COLLECT COMPOSIT SAMPLES.
	L1-5 50 ml L1-10 600 ml
	L2-5 800 ml L2-10 600 ml
	L3-5 0 L3-10 0
	L4-5 350 ml L4-10 0
	ALL LYSIMETERS RECHARGED TO 15" hg.
1140	COLLECT SOURCE SAMPLE. COLLECT DUP.
1200	DEPART FOR SCVWD LAB
1215	DELIVER SAMPLES.
	RETURN TO MV OFFICE

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study

Field Activity: IDT LYSIMETERS

Weather: Sunny/cool

Project No.: 27011-07-4200

Date: 1-9-~~08~~04

Logged by: AUSTIN

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1000	ON SITE AT IDT TO CHECK/RECHARGE LYSIMETERS.
	All will BE RECHARGED TO 15" hg REGARDLESS
	of RESIDUAL.
	L1-5 - 3.0 hg
	L1-10 - 5.7 hg
	L2-5 5.9 hg
	L2-10 4.9 hg
	L3-5 0
	L3-10 0
	L4-5 8.6 hg
	L4-10 7.7 hg.
1300	Departing SITE

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study
Field Activity: IDT LYSIMETERS
Weather: Sunny / cool

Project No: 27011-07-4200
Date: 1-16-09
Logged by: AUSTIN
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1130	ON SITE AT IDT CAMPUS. CHECKING LYSIMETERS.
	ALL LYSIMETERS WILL BE RECHARGED TO 15" hg
	REGARDLESS OF RESIDUAL VACUUM.
	L1-5 = 3.2" hg
	L1-10 = 5.1" hg
	L2-5 = 4.7" hg
	L2-10 = 2.2" hg
	L3-5 = 0
	L3-10 = 0
	L4-5 = 6.8" hg
	L4-10 = 0.5" hg
1430	Done left site

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study
Field Activity: IDT Lysimeters
Weather: Raining

Project No.: 27011-07-4200
Date: 1-25-09
Logged by: H. Costa Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1100	Onsite at IDT, Checked in at main lobby.
	All Lysimeters will be recharged to 15" Hg regardless
	of residual vacuum.
	L1-5 = 2.8" Hg
	L1-10 = 5.7" Hg
	L2-5 = 1.4 Hg
	L2-10 = 2.6 Hg
	L3-5 = 0
	L3-10 = 0
	L4-5 = 6.6 Hg
	L4-10 = 0.5 Hg
1330	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD

Field Activity: LYSIMETER & SOURCE SAMPLING

Weather: CLEAR/SUNNY/WARM

Project No.: 27011-07-4200

Date: 2/2/09

Logged by: MURPHY

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0730	ON SITE AT IDT CAMPUS. CHECK IN WITH SECURITY.
0750	BEGIN COLLECTING COMPOSITE SAMPLES.

L1-5	50 ml	L1-10	1400 ml
L2-5	800 ml	L2-10	1450 ml
L3-5	0	L3-10	0
L4-5	280 ml	L4-10	0

TIME	DAILY ACTIVITIES AND EVENTS
	ALL LYSIMETERS WERE RECHARGED TO 15" hg
1000	FILLING SAMPLE BOTTLES WITH MINIMUM VOLUME. FOR L5-COMP I SKIPPED HAA6, NDMA, TOTAL PHOSPHATE, AND BROMIDE. L10-COMP HAD ENOUGH WATER FOR ALL SAMPLES.
1045	COLLECT SOURCE SAMPLE.
1130	DEPART FOR SCVWD LAB TO DELIVER BROMIDE SAMPLES.
1230	RETURN TO MV OFFICE.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study
Field Activity: IDT Lysimeter Recharge
Weather: Overcast/Raining

Project No.: 27011-07-4200
Date: 2-13-09
Logged by: H. Castro Sr.
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1040	Onsite at IDT. Checked in at main lobby.
	All Lysimeters will be recharged to 15' Hg regardless
	of residual vacuum.
	L1-5 = 3.4 Hg
	L1-10 = 6.0 Hg
	L2-5 = 4.9 Hg
	L2-10 = 5.9 Hg
	L3-5 = 0
	L3-10 = 0
	L4-5 = 6.9 Hg
	L4-10 = 0 Hg
1245	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study
Field Activity: IDT Lysimeter Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 2-20-09
Logged by: H. Castrov
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
935	Onsite at IDT. Checked in at main lobby. All lysimeters will be recharged to 15" Hg regardless of residual vacuum.
	L1-5 = 4.2 Hg L1-10 = 5.5 Hg
	L2-5 = 4.5 Hg L2-10 = 4.9 Hg
	L3-5 = 0 Hg L3-10 = 0 Hg
	L4-5 = 5.5 Hg L4-10 = 0 Hg
1130	Left site.

Comments/Remarks:

LOCUS
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study
Field Activity: IDT Lysimeter Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 2-27-09
Logged by: H. Castro Jr.
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1005	Onsite at IDT. Checked in at main lobby.
	All lysimeters will be recharged to 15" Hg regardless of
	residual vacuum.
	L1-5 = 3.2 Hg
	L1-10 = 5.0 Hg
	L2-5 = 1.9 Hg
	L2-10 = 1.0 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 4.5 Hg
	L4-10 = 2.1 Hg
1150	Left site.

Comments/Remarks:

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeter, Recharge
Weather: Cloudy, Sprinkles

Project No.: 27011-07-4200
Date: 3-6-09
Logged by: Austin
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1030	All Lysimeters will be charged to 15" Hg
	Regardless of Residual Vaccuum.
	L1-5 = 3.0 Hg
	L1-10 = 4.9 Hg
	L2-5 = 1.7 Hg
	L2-10 = 1.1 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 4.3 Hg
	L4-10 = 2.0 Hg
1200	left site

Comments/Remarks:

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeters Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 3-13-09
Logged by: H. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1100	Arrived onsite. Checked in at lobby.
	All Lysimeters will be recharged to 15" Hg regardless
	of residual vacuum.
	L1-5 = 2.5 Hg
	L1-10 = 4.8 Hg
	L2-5 = 4.0 Hg
	L2-10 = 2.0 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 5.0 Hg
	L4-10 = 2.7 Hg
1230	Left site.

Comments/Remarks:

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeters Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 3-20-09
Logged by: H. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1045	Arrived onsite. Checked in at lobby.
	All Lysimeters will be recharged to 15" Hg regardless
	of residual vacuum.
	L1-5 = 2.5 Hg.
	L1-10 = 4.2 Hg.
	L2-5 = 4.3 Hg.
	L2-10 = 2.4 Hg.
	L3-5 = 0 Hg.
	L3-10 = 0 Hg.
	L4-5 = 4.8 Hg.
	L4-10 = 2.9 Hg.
1210	Left site.

Comments/Remarks:

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeters Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 3-27-09
Logged by: H. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1030	Arrived onsite. Checked in at lobby.
	All Lysimeters will be recharged to 15" Hg regardless of
	residual vacuum.
	L1-5 = 2.8 Hg
	L1-10 = 4.6 Hg
	L2-5 = 4.5 Hg
	L2-10 = 2.7 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 5.0 Hg
	L4-10 = 3.0 Hg
1200	Left site

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeters Recharge
Weather: clea

Project No.: 27011-07-4200
Date: 4-10-09
Logged by: H. Castro Jr.
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1100	Arrived onsite. Checked in at lobby.
	All Lysimeters will be recharged to 15" Hg regardless
	of residual vacuum.
	L1-5 = 2.3 Hg
	L1-10 = 4.0 Hg
	L2-5 = 4.1 Hg
	L2-10 = 2.3 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 4.8 Hg
	L4-10 = 2.8 Hg
1225	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeters Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 4-24-09
Logged by: H. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1045	Arrived onsite. Checked in at lobby.
	All Lysimeters will be recharged to 15" Hg regardless
	of residual vacuum.
	L1-5 = 2.2 Hg
	L1-10 = 4.1 Hg
	L2-5 = 4.2 Hg
	L2-10 = 2.4 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 4.6 Hg
	L4-10 = 2.6 Hg
1205	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeters Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 5-8-09
Logged by: H. Costa Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1115	Arrived onsite. Checked in at lobby.
	All Lysimeters will be recharged to 15" Hg regardless of
	residual vacuum.
	L1-5 = 2.4 Hg
	L1-10 = 3.8 Hg
	L2-5 = 4.3 Hg
	L2-10 = 2.4 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 4.6 Hg
	L4-10 = 2.7 Hg
1235	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeters Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 5-29-09
Logged by: A. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1045	Arrived onsite. Checked in at lobby.
	All lysimeters will be recharged to 15" Hg regardless of
	residual vacuum.
	L1-5 = 2.1 Hg
	L1-10 = 3.2 Hg
	L2-5 = 4.0 Hg
	L2-10 = 2.3 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 4.4 Hg
	L4-10 = 2.1 Hg
1215	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeters Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 6-12-09
Logged by: H. Castro Jr.
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1015	Arrived onsite. Checked in at lobby.
	All lysimeters will be recharged to 15" Hg regardless of residual vacuum.
	L1-5 = 2.3 Hg
	L1-10 = 3.3 Hg
	L2-5 = 3.9 Hg
	L2-10 = 2.6 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 4.4 Hg
	L4-10 = 2.3 Hg
1140	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: IDT/SCVWD Reclaimed Water Supply
Field Activity: Lysimeter Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 6-26-09
Logged by: H. Castro Jr.
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
945	Arrived onsite. Checked in at lobby.
	All lysimeters will be recharged to 15" Hg regardless of
	residual vacuum.
	L1-5 = 1.4 Hg
	L1-10 = 3.0 Hg
	L2-5 = 3.7 Hg
	L2-10 = 1.9 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 4.8 Hg
	L4-10 = 2.0 Hg
1110	Left site.

Comments/Remarks:

Locus
TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeter Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 7-27-09
Logged by: H. Castro Jr.
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
915	Arrived onsite. Checked in at lobby.
	All lysimeters will be recharged to 15" Hg regardless
	of residual vacuum.
	L1-5 = 1.9 Hg
	L1-10 = 4.0 Hg
	L2-5 = 3.5 Hg
	L2-10 = 3.0 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 6.0 Hg
	L4-10 = 2.0 Hg
1045	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IOT Lysimeter Recharge
Weather: Clear

Project No.: 27011-07-4200
Date: 8-7-09
Logged by: A. Castro Jr
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1030	Arrived onsite. Checked in at lobby.
	All lysimeters will be recharged to 15" Hg regardless
	of residual vacuum.
	L1-5 = 2.1 Hg
	L1-10 = 5.7 Hg
	L2-5 = 2.2 Hg
	L2-10 = 2.6 Hg
	L3-5 = 0
	L3-10 = 0
	L4-5 = 5.7 Hg
	L4-10 = 1.4 Hg
1150	Left site.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeters Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 8-21-09
Logged by: H. Castuto
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
900	Arrived onsite. Checked in at lobby.
	All lysimeters will be recharged to 15" Hg regardless of
	residual vacuum.
	L1-5 = 2.0 Hg
	L1-10 = 5.4 Hg
	L2-5 = 2.3 Hg
	L2-10 = 2.8 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 5.5 Hg
	L4-10 = 1.6 Hg
1015	Left site.

Comments/Remarks:

Locus TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Supply
Field Activity: IDT Lysimeters Recharge
Weather: clear

Project No.: 27011-07-4200
Date: 9-4-09
Logged by: A. Costanzo
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1010	Arrived onsite. Checked in at lobby.
	All lysimeters will be recharged to 15" Hg regardless of residual vacuum.
	L1-5 = 2.3 Hg
	L1-10 = 5.6 Hg
	L2-5 = 2.0 Hg
	L2-10 = 2.2 Hg
	L3-5 = 0 Hg
	L3-10 = 0 Hg
	L4-5 = 5.5 Hg
	L4-10 = 1.0 Hg
1135	Left site.

Comments/Remarks:

Locus

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 10-9-09
Logged by: T. MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0800	ARRIVED AT IDT CAMPUS. CHECK IN WITH SECURITY
	ALL LYSIMETERS RECHARGED TO 15" Hg.
	L1-5 3.0 Hg
	-10 5.0 Hg
	L2-5 3.0 Hg
	-10 3.5 Hg
	L3-5 0
	-10 0
	L4-5 2.5 Hg
	-10 2.5 Hg
0900	DEPARTED.

Comments/Remarks:

Locus

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 10-16-09
Logged by: T. MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0930	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY.
	ALL LYSIMETERS RECHARGED TO 15" Hg.
	L1-5 1.5 Hg
	-10 3.5 Hg
	L2-5 3.0 Hg
	-10 3.0 Hg
	L3-5 0
	-10 0
	L4-5 5.0 Hg
	-10 3.5 Hg
1030	DEPARTED

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD

Field Activity: IDT LYSIMETERS

Weather:

Project No.: 27011.07.4200

Date: 10/23/09

Logged by: MURPHY

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
0840	ARRIVE AT IDT CAMPUS. CHECK IN.
	ALL LYSIMETERS WILL BE RECHARGED TO 15" Hg.
	L1 - 5 1.0 Hg
	-10 2.0 Hg
	L2 - 5 0 Hg
	-10 1.5 Hg
	L3 - 5 0
	-10 0
	L4 - 5 2.0 Hg
	-10 2.0 Hg
0945	DEPARTING.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 10/30/09
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1000	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY.
	ALL LYSIMETERS WILL BE RECHARGED TO 15" Hg.
	L1 - 5 2.0 Hg
	L1 - 10 2.0 Hg
	L2 - 5 1.5 Hg
	-10 2.0 Hg
	L3 - 5 0
	-10 0
	L4 - 5 3.0 Hg
	-10 1.0 Hg

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD

Field Activity: IDT LYSIMETERS

Weather:

Project No.: 27011.07.4200

Date: 11/9/09

Logged by: MURPHY

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1130	ARRIVE AT IDT CAMPUS. CHECK IN.
	ALL LYSIMETERS TO BE RECHARGED TO 15" Hg.
	L1-5 1.0 Hg
	-10 2.5 Hg
	L2-5 2.0 Hg
	-10 2.0 Hg
	L3-5 0
	-10 0
	L4-5 4.0 Hg
	-10 4.0 Hg
1220	DEPARTED

Comments/Remarks:

Locus TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD

Field Activity: IDT LYSIMETERS

Weather:

Project No.: 27011-07-4200

Date: 1/16/03

Logged by: MURPHY

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1120	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY
	ALL LYSIMETERS WILL BE RECHARGED TO 15" Hg.
	L1-5 3.0 Hg
	-10 2.5 Hg
	L2-5 2.0 Hg
	-10 2.5 Hg
	L3-5 0
	-10 0
	L4-5 2.0 Hg
	-10 3.0 Hg
1215	DEPARTED

Comments/Remarks:

Locus TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 11/23/09
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1245	ARRIVE AT IDT. CHECK IN WITH SECURITY.
	ALL LYSIMETERS RECHARGED TO 15" Hg
	L1-5 4.5 Hg
	-10 2.5 Hg
	L2-5 2.5 Hg
	-10 3.5 Hg
	L3-5 0
	-10 0
	L4-5 1.5 Hg
	-10 2.0 Hg
1345	DEPARTED.

Comments/Remarks:

Locus TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 11/30/09
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1100	ARRIVE AT IDT CAMPUS. CHECK IN WITH
	ALL LYSIMETERS WILL BE RECHARGED TO 15" Hg.
	L1-5 5.0 Hg
	-10 4.0 Hg
	L2-5 3.0 Hg
	-10 3.0 Hg
	L3-5 0
	-10 0
	L4-5 3.0 Hg
	-10 1.0 Hg
1155	DEPARTED.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD Reclaimed Water Study

Field Activity: IDT LYSIMETERS

Weather:

Project No.: 27011-4200

Date: 12/21/09

Logged by: MURPHY

Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1115	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY.
	ALL LYSIMETERS WILL BE RECHARGED TO 15" Hg.
	L1-5 4.0 Hg L1-10 2.0 Hg
	L2-5 2.0 Hg L2-10 1.0 Hg
	L3-5 0 L3-10 0
	L4-5 1.5 Hg L4-10 1.5 Hg
1200	DEPARTING.

Comments/Remarks:

Locus TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD RECLAIMED WATER STUDY
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 1/25/10
Logged by: MURPHY
Page: 1 of 1

TIME	DAILY ACTIVITIES AND EVENTS
1140	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY.
	ALL LYSIMETERS WILL BE RECHARGED TO 15"Hg.
	L1-5 1.0 Hg L1-10 1.5 Hg
	L2-5 1.0 Hg L2-10 1.5 Hg
	L3-5 0 L3-10 0
	L4-5 1.5 Hg L4-10 1.0 Hg
1230	DEPARTING.

Comments/Remarks:

LOCUS TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD RECLAIMED WATER STUDY
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 2/8/10
Logged by: MURPHY
Page: 1 of

TIME	DAILY ACTIVITIES AND EVENTS
1315	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY.
	ALL LYSIMETERS WILL BE RECHARGED TO 15" Hg.
	L1-5 2.5 Hg L1-10 2.0 Hg
	L2-5 2.0 Hg L2-10 2.5 Hg
	L3-5 0 L3-10 0
	L4-5 3.0 Hg L4-10 1.0 Hg
1400	DEPARTING.

Comments/Remarks:

Locus TECHNOLOGIES

DAILY FIELD ACTIVITY LOG

Project Name: SCVWD RECLAIMED WATER STUDY
Field Activity: IDT LYSIMETERS
Weather:

Project No.: 27011-07-4200
Date: 2/22/10
Logged by: MURPHY
Page: 1 of

TIME	DAILY ACTIVITIES AND EVENTS
1045	ARRIVE AT IDT CAMPUS. CHECK IN WITH SECURITY
	ALL LYSIMETERS WILL BE RECHARGED TO 15" Hg
	L1-5 2.5 Hg L1-10 2.5 Hg
	L2-5 2.0 Hg L2-10 2.5 Hg
	L3-5 0 L3-10 0
	L4-5 4.0 Hg L4-10 2.0 Hg
1145	DEPARTING.

Comments/Remarks:

APPENDIX III-E

LAB REPORTS FOR ANALYSES OF CONSTITUENTS

Baseline
5/18/2008

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.testamericainc.com

2 June, 2008

RECEIVED
JUN - 5 2008
BY:

Norman Wong
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

RE: Recycled Water
Work Order: MRE0508

Enclosed are the results of analyses for samples received by the laboratory on 05/19/08 17:30. If you have any questions concerning this report, please feel free to contact me

Sincerely,

Leticia Reyes

Leticia Reyes
Project Manager

CA ELAP Certificate # 2682

The Chain(s) of Custody, 3 pages, are included and are an integral part of this report.

The report shall not be reproduced except in full, without the written approval of the laboratory. The client, by accepting this report, also agrees not to alter any reports whether in the hard copy or electronic format and to use reasonable efforts to preserve the reports in the form and substance originally provided by TestAmerica

For Volatile Analysis a trip blank is required to be provided. If trip blank results are not included in the report, then either the trip blank was not submitted or requested to be analyzed.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Locus Technologies	Project: Recycled Water	MRE0508
299 Fairchild Dr	Project Number: 27011-07-3200	**Reported:**
Mountain View CA, 94043	Project Manager: Norman Wong	06/02/08 15:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	MRE0508-01	Water	05/19/08 08:45	05/19/08 17:30
MW-2	MRE0508-02	Water	05/19/08 09:50	05/19/08 17:30
MW-3	MRE0508-03	Water	05/19/08 10:50	05/19/08 17:30
MW-4	MRE0508-04	Water	05/19/08 12:00	05/19/08 17:30
SJ/SC treat	MRE0508-05	Water	05/19/08 07:00	05/19/08 17:30
4761	MRE0508-06	Water	05/19/08 07:35	05/19/08 17:30
4762	MRE0508-07	Water	05/19/08 00:00	05/19/08 17:30

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Unless otherwise stated, results are reported on a wet weight basis. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Dr Mountain View CA, 94043	Project: Recycled Water Project Number: 27011-07-3200 Project Manager: Norman Wong	MRE0508 **Reported:** 06/02/08 15:44

Conventional Chemistry Parameters by APHA/EPA Methods

TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (MRE0508-01) Water Sampled: 05/19/08 08:45 Received: 05/19/08 17:30									
Methylene Blue Active Substances	ND	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
MW-2 (MRE0508-02) Water Sampled: 05/19/08 09:50 Received: 05/19/08 17:30									
Methylene Blue Active Substances	ND	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
MW-3 (MRE0508-03) Water Sampled: 05/19/08 10:50 Received: 05/19/08 17:30									
Methylene Blue Active Substances	ND	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
MW-4 (MRE0508-04) Water Sampled: 05/19/08 12:00 Received: 05/19/08 17:30									
Methylene Blue Active Substances	ND	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
SJ/SC treat (MRE0508-05) Water Sampled: 05/19/08 07:00 Received: 05/19/08 17:30									
Methylene Blue Active Substances	**0.21**	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
4761 (MRE0508-06) Water Sampled: 05/19/08 07:35 Received: 05/19/08 17:30									
Methylene Blue Active Substances	**0.18**	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	
4762 (MRE0508-07) Water Sampled: 05/19/08 00:00 Received: 05/19/08 17:30									
Methylene Blue Active Substances	ND	0.10	mg/l	1	8E23019	05/20/08	05/20/08 12:30	SM 5540C	

The results in this report apply to the samples analyzed in accordance with the chain of custody document Unless otherwise stated, results are reported on a wet weight basis This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Dr Mountain View CA, 94043	Project: Recycled Water Project Number: 27011-07-3200 Project Manager: Norman Wong	MRE0508 Reported: 06/02/08 15:44

Conventional Chemistry Parameters by APHA/EPA Methods - Quality Control

TestAmerica Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 8E23019 - General Preparation / SM 5540C										
Blank (8E23019-BLK1)				Prepared & Analyzed: 05/20/08						
Methylene Blue Active Substances	ND	0 10	mg/l							
Laboratory Control Sample (8E23019-BS1)				Prepared & Analyzed: 05/20/08						
Methylene Blue Active Substances	0 571	0 10	mg/l	0 600		95	60-120			
Matrix Spike (8E23019-MS1)	**Source: MRE0508-07**			Prepared & Analyzed: 05/20/08						
Methylene Blue Active Substances	0 549	0 10	mg/l	0 600	ND	92	60-120			
Matrix Spike Dup (8E23019-MSD1)	**Source: MRE0508-07**			Prepared & Analyzed: 05/20/08						
Methylene Blue Active Substances	0 616	0 10	mg/l	0 600	ND	103	60-120	11	20	

The results in this report apply to the samples analyzed in accordance with the chain of custody document Unless otherwise stated, results are reported on a wet weight basis This analytical report must be reproduced in its entirety.

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit or MDL, if MDL is specified
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

MRE0508

SERIAL NO. ✱
12716

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

PROJECT NAME Recycled Water
PROJECT NUMBER 27011-07-3200
RECORDER C. Newman (SIGN)

SAMPLERS Castro / Murphy (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D. Plastic Liter]
E. Brass Tube
[✓ F. Other plastic 250-ml]

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H. Blank/Spike]
[✓ I. Other treated water]

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB EM lab P&K

LABORATORY USE ONLY
LAB PROJECT NO. ______

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO₃	HCL		Field Filtered (check)	ANALYSIS REQUESTED SM9215B	SM9221B	SM9221E	SM9221F	SM5540C				TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
01	1	5/19	0845	MW-1				D/F	A	X					X	X	X	X	X				1						
02	2		0950	MW-2				D/F	A	X					X	X	X	X	X				1						
03	3		1050	MW-3				D/F	A	X					X	X	X	X	X				1						
04	4		1200	MW-4				D/F	A	X					X	X	X	X	X				1						
05	5		0700	SJ/SC treat				D/F	I	X					X	X	X	X	X				1						
06	6		0735	4761				D/F	I	X					X	X	X	X	X				1						
07	7	↓	N/A	4762				D/F	H	X						X	X	X	X				1						
	8																												
	9																												
	10																												
	11																												
	12																												
	13																												
	14																												
	15																												
	16																												

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Murphy		5/19/08	1610
Logan Tran		〃	〃
	Andy Mulliin TAMH	5/19/08	1730

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
courier	cooler	NONE	Murphy	5/19/08	1315	Logan Tran	5/19/08	203pm

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1333 N. CALIFORNIA BLVD., STE. 540 • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
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☐ OTHER ______ TEL ______ FAX ______

REV. 2/99

WHITE: Field Copy YELLOW: Project Copy PINK: Laboratory Copy

PROBLEM CHAIN-OF-CUSTODY

MRE0508

DATE/TIME 05/19/08
CLIENT Laeis Tech
CLIENT SERVICES REP Leticia

DATE RECEIVED 05/19/08
TURN AROUND TIME Std
ANALYST AM

PROBLEM

① COC says 1L Poly and 250mL Poly for each sample, but we only recieved the 1L Polys.

RESOLUTION

Client Instruction* Per Logan of EMLab - San Bruno: EMLab will analyze, report, and invoice all of the bacterrological analyses directly to the client. TestAmerica should analyze, report, and invoice only the MBAS to the client.

Telephone Number of Client:

Client Contact for Instruction:

Date and Time of Instruction: 5/22/08, 1320

Date & Time Form Given to Sample Control: 5/22/08, 1325

CLIENT SERVICES REP. SIGNATURE:
DATE/TIME: 5/22/08, 1320

*If client does not return call within 24 hours, please route this form to the Laboratory Director.

White Copy - Client Services

Pink Copy - Sample Control

TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: 051908 AH F Locus Tech.
REC. BY (PRINT) AM
WORKORDER: MRE0508

DATE REC'D AT LAB: 5/19/08
TIME REC'D AT LAB: 1730
DATE LOGGED IN: 5/23/08

For Regulatory Purposes?
___ DRINKING WATER
___ WASTE WATER
X OTHER

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s) Present / [✓ Absent]
   Intact / Broken*
2. Chain-of-Custody [✓ Present] / Absent*
3. Traffic Reports or Packing List: Present / [✓ Absent]
4. Airbill: Airbill / Sticker
   Present / [✓ Absent]
5. Airbill #: —
6. Sample Labels: [✓ Present] / Absent
7. Sample IDs: [✓ Listed] / Not Listed on Chain-of-Custody
8. Sample Condition: [✓ Intact] / Broken* / Leaking*
9. **Does information on chain-of-custody, traffic reports and sample labels agree? [✓ Yes] / No***
10. Sample received within hold time? [✓ Yes] / No*
11. Adequate sample volume received? [✓ Yes] / No*
12. Proper preservatives used? [✓ Yes] / No*
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / [✓ No]*
14. Read Temp: 4.6°C
    Correction Factor: -1.0
    Corrected Temp: 3.6°C
    Is corrected temp. 0-6°C? [✓ Yes] / No**

**Exception (if any): Metals / Perchlorate DFF on Ice or Problem COC

LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
01	MW-1	1L Poly	—	—	W	5/19/08	
02	MW-2	↓	↓	↓	↓	↓	
03	MW-3	↓	↓	↓	↓	↓	
04	MW-4	↓	↓	↓	↓	↓	
05	SJ/SC treat	↓	↓	↓	↓	↓	
06	4761	↓	↓	↓	↓	↓	
07	4762	↓	↓	↓	↓	↓	

AM
05/19/08

*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

SAMPLERECEIPTLOG
Revision 9 (10/26/07)

Page 1 of 1

TEST AMERICA SAMPLE RECEIPT LOG

CLIENT NAME: ~~F~~ Locus Tech. 05/19/08 AH
REC. BY (PRINT) AM
WORKORDER: MRE0508

DATE REC'D AT LAB: 5/19/08
TIME REC'D AT LAB: 1730
DATE LOGGED IN: 5/23/08

For Regulatory Purposes?
___ DRINKING WATER
___ WASTE WATER
X OTHER

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s) Present / [✓ Absent]
   Intact / Broken*
2. Chain-of-Custody [✓ Present] / Absent*
3. Traffic Reports or Packing List: Present / [✓ Absent]
4. Airbill: Airbill / Sticker
   Present / [✓ Absent]
5. Airbill #: —
6. Sample Labels: [✓ Present] / Absent
7. Sample IDs: [✓ Listed] / Not Listed on Chain-of-Custody
8. Sample Condition: [✓ Intact] / Broken* / Leaking*
9. **Does information on chain-of-custody, traffic reports and sample labels agree?** [✓ **Yes**] **/ No***
10. Sample received within hold time? [✓ Yes] / No*
11. Adequate sample volume received? [✓ Yes] / No*
12. Proper preservatives used? [✓ Yes] / No*
13. Trip Blank / Temp Blank Received? (circle which, if yes) Yes / [✓ No*]
14. Read Temp: 4.6°C
    Correction Factor: -1.0
    Corrected Temp: 3.6°C
    Is corrected temp. 0-6°C? [✓ Yes] / No**

**Exception (if any): Metals / Perchlorate DFF on ice or Problem COC

LAB SAMPLE #	CLIENT ID	CONTAINER DESCRIPTION	PRESERVATIVE	pH	SAMPLE MATRIX	DATE SAMPLED	REMARKS: CONDITION (ETC.)
01	MW-1	1L Poly	—	—	W	5/19/08	
02	MW-2	↓	↓	↓	↓	↓	
03	MW-3	↓	↓	↓	↓	↓	
04	MW-4	↓	↓	↓	↓	↓	
05	SJ/SC treat	↓	↓	↓	↓	↓	
06	4761	↓	↓	↓	↓	↓	
07	4762	↓	↓	↓	↓	↓	

AM 05/19/08

*IF CIRCLED, CONTACT PROJECT MANAGER AND ATTACH RECORD OF RESOLUTION.

SAMPLERECEIPTLOG
Revision 9 (10/26/07)

WL

Weck Laboratories, Inc.

Analytical Laboratory Services - Since 1964

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BY:

CERTIFICATE OF ANALYSIS

Client: Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong

Phone: (650) 641-8258
Fax: (650) 960-0739

Report Date: 06/16/08 13:58
Received Date: 05/21/08 09:00
Turn Around: Normal

Work Order #: 8052109

Client Project: 27011-07-4100

NELAP #04229CA ELAP#1132 NEVADA #CA211 HAWAII LACSD #10143

The results in this report apply to the samples analyzed in accordance with the Chain of Custody document. Weck Laboratories, Inc. certifies that the test results meet all NELAC requirements unless noted in the case narrative. This analytical report is confidential and is only intended for the use of Weck Laboratories, Inc. and its client. This report contains the Chain of Custody document, which is an integral part of it, and can only be reproduced in full with the authorization of Weck Laboratories, Inc.

Dear Norman Wong :

Enclosed are the results of analyses for samples received 05/21/08 09:00 with the Chain of Custody document. The samples were received in good condition. The samples were received at 3.8 °C and on ice. All analysis met the method criteria except as noted below or in the report with data qualifiers.

Reviewed by:

Hai Van Nguyen
Project Manager

Locus Technologies
299 Fairchild Drive
Mountain View CA. 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Sampled by:	Sample Comments	Lab ID	Matrix	Date Sampled
MW-1	Castro/Murphy		8052109-01	Water	05/19/08 08:45
MW-2	Castro/Murphy		8052109-02	Water	05/19/08 09:50
MW-3	Castro/Murphy		8052109-03	Water	05/19/08 10:50
MW-4	Castro/Murphy		8052109-04	Water	05/19/08 12:00
SJ/SC Plant	Castro/Murphy		8052109-05	Water	05/19/08 07:00
4761	Castro/Murphy		8052109-06	Water	05/19/08 07:35
4762	Castro/Murphy		8052109-07	Water	05/19/08 00:00

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

MW-1 8052109-01 (Water) Date **05/19/08 08:45**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	61	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Nitrate as N	5700	ug/l	110	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Sulfate as SO4	89	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	420	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	520	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	0.57	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	580	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	0.50	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate. 2,3-Dibromopropionic acid	102	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

MW-1 8052109-01 (Water) Date **05/19/08 08:45**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	180	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	100	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	2.3	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	66	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	43	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	4.3	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

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MW-1 8052109-01 (Water) Date **05/19/08 08:45**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

MW-1 8052109-01 (Water) **Date** **05/19/08 08:45**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Surrogate. 1,2-Dichlorobenzene-d4	99	%	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	
Surrogate. 4-Bromofluorobenzene	97	%	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	

MW-2 8052109-02 (Water) **Date** **05/19/08 09:50**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	**26**	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04
Nitrate as N	**3600**	ug/l	110	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-2 8052109-02 (Water) Date **05/19/08 09:50**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Sulfate as SO4	40	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	320	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	390	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	0.44	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	380	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	0.44	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	111	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	140	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	62	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	1.4	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Locus Technologies
299 Fairchild Drive
Mountain View CA. 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
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MW-2 8052109-02 (Water) Date **05/19/08 09:50**

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Magnesium	36	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	32	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
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MW-2 8052109-02 (Water) Date **05/19/08 09:50**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
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Date Received: 05/21/08 09:00
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MW-2 8052109-02 (Water) Date **05/19/08 09:50**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	97	%	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	97	%	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	

MW-3 8052109-03 (Water) Date **05/19/08 10:50**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	**45**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04
Nitrate as N	**6300**	ug/l	110	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04
Sulfate as SO4	**65**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

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Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

MW-3 8052109-03 (Water) Date **05/19/08 10:50**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**490**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	**600**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	**0.49**	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	**610**	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	**0.48**	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	99	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	**200**	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	**100**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	**0.85**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	**61**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	**42**	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

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MW-3 8052109-03 (Water) Date 05/19/08 10:50

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-3 8052109-03 (Water) Date 05/19/08 10:50

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	

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MW-3 8052109-03 (Water) Date **05/19/08 10:50**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0830	05/21/08	05/22/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	96	%	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	96	%	*70-130*		*EPA 524.2*	*W8E0830*	*05/21/08*	*05/22/08*	mdt	

MW-4 8052109-04 (Water) Date **05/19/08 12:00**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	50	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04
Nitrate as N	4000	ug/l	110	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-04
Sulfate as SO4	69	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	510	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	620	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-4 8052109-04 (Water) **Date** **05/19/08 12:00**

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	**0.90**	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	**630**	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	**0.86**	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	93	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	**200**	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	**110**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	**0.81**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	**61**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	**41**	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

MW-4 8052109-04 (Water) **Date** **05/19/08 12:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

MW-4 8052109-04 (Water) Date **05/19/08 12:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: Date Reported:	05/21/08 09:00 06/16/08 13:58

MW-4 8052109-04 (Water) Date **05/19/08 12:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	103	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	101	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	

SJ/SC Plant 8052109-05 (Water) Date **05/19/08 07:00**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	190	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Nitrate as N	9600	ug/l	560	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Sulfate as SO4	94	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	190	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	230	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	6.8	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	690	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	6.9	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

SJ/SC Plant 8052109-05 (Water) Date **05/19/08 07:00**

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	**9.6**	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	**3.4**	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	**14**	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	**27**	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	**9.7**	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	85	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	**480**	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	**54**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	**16**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	**30**	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	**130**	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA. 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

SJ/SC Plant 8052109-05 (Water) Date 05/19/08 07:00

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1-Dichloropropene	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1 0	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5 0	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5 0	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Benzene	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Bromodichloromethane	**15**	ug/l	0.50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Bromoform	**1.3**	ug/l	0.50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Chloroform	**12**	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0 50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524 2	W8E0889	05/22/08	05/22/08	mdt	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

SJ/SC Plant 8052109-05 (Water) Date **05/19/08 07:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dibromochloromethane	7.1	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

SJ/SC Plant 8052109-05 (Water) Date **05/19/08 07:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	102	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	102	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	

4761 8052109-06 (Water) Date **05/19/08 07:35**

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Chloride	**190**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Nitrate as N	**9300**	ug/l	560	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	O-09
Sulfate as SO4	**96**	mg/l	2.5	5	EPA 300.0	W8E1018	05/22/08	05/22/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	**190**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	**230**	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8E1146	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	**7.0**	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	**680**	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	**6.9**	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	**10**	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	**3.3**	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

4761 8052109-06 (Water) Date 05/19/08 07:35

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dichloroacetic acid (dcaa)	15	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Total HAA5	29	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	11	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	89	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	480	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	53	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	15	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	29	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	130	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

4761 8052109-06 (Water) Date **05/19/08 07:35**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromodichloromethane	**16**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromoform	**1.3**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroform	**13**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromochloromethane	**7.8**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies
299 Fairchild Drive
Mountain View CA. 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

4761 8052109-06 (Water) Date **05/19/08 07:35**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methylene chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

4761 8052109-06 (Water) Date 05/19/08 07:35

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	102	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	102	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	

4762 8052109-07 (Water) Date 05/19/08 00:00

Anions by EPA Method 300.0/300.1/326

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromide	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/23/08	mac	
Chloride	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/23/08	mac	
Nitrite as N	ND	ug/l	150	1	EPA 300.0	W8E1018	05/22/08	05/23/08	mac	O-09
Nitrate as N	ND	ug/l	110	1	EPA 300.0	W8E1018	05/22/08	05/23/08	mac	O-09
Sulfate as SO4	ND	mg/l	0.50	1	EPA 300.0	W8E1018	05/22/08	05/23/08	mac	

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0092	05/30/08	05/30/08	png	
Bicarbonate Alkalinity as HCO3	ND	mg/l	2.0	1	SM 2320B	W8F0092	05/30/08	05/30/08	png	
Carbonate Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0092	05/30/08	05/30/08	png	
Hydroxide Alkalinity as CaCO3	ND	mg/l	2.0	1	SM 2320B	W8F0092	05/30/08	05/30/08	png	
Total Cyanide	ND	mg/l	0.0050	1	SM 4500 CN E	W8E1066	05/28/08	06/03/08	hml	
Dissolved Organic Carbon	ND	mg/l	0.30	1	SM5310C	W8E1056	05/28/08	05/28/08	jlp	
Total Dissolved Solids	ND	mg/l	10	1	SM2540C	W8E0812	05/21/08	05/21/08	kww	
Total Organic Carbon (TOC)	ND	mg/l	0.30	1	SM5310C	W8E1009	05/27/08	05/27/08	jlp	

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Bromochloroacetic acid (bcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dibromoacetic acid (dbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Dichloroacetic acid (dcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monobromoacetic acid (mbaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Monochloroacetic acid (mcaa)	ND	ug/l	2.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	

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4762 8052109-07 (Water) Date **05/19/08 00:00**

HAAs by EPA 552.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total HAA5	ND	ug/l	5.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Trichloroacetic acid (tcaa)	ND	ug/l	1.0	1	EPA 552.2	W8E1052	05/28/08	05/30/08	cwn	
Surrogate: 2,3-Dibromopropionic acid	101	%	*70-130*		*EPA 552.2*	*W8E1052*	*05/28/08*	*05/30/08*	cwn	

Metals by EPA 200 Series Methods

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Total Boron	ND	ug/l	10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Calcium	ND	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Potassium	ND	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Magnesium	ND	mg/l	0.10	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	
Sodium	ND	mg/l	0.50	1	EPA 200.7	W8E1039	05/28/08	06/03/08	jba	

Perchlorate by EPA 314.0

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Perchlorate	ND	ug/l	4.0	1	EPA 314.0	W8F0210	06/04/08	06/04/08	mac	

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,1,1,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,1-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2,2-Tetrachloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1,2-Trichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,1-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,3-Trichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2,4-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

Locus Technologies
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4762 8052109-07 (Water) Date **05/19/08 00:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
1,2-Dichloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3 Dichloropropene (Total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3,5-Trimethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
1,3-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2,2-Dichloropropane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Butanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chloroethyl vinyl ether	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
2-Hexanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Chlorotoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
4-Methyl-2-pentanone	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Benzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromodichloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromoform	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Bromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Carbon tetrachloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloroform	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Chloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
cis-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromochloromethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dibromomethane	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Dichlorodifluoromethane (Freon 12)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Di-isopropyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Ethyl tert-butyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	

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Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
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4762 8052109-07 (Water) Date **05/19/08 00:00**

Volatile Organic Compounds by EPA Method 524.2

Analyte	Result	Units	Reporting Limit	Dilution Factor	Method	Batch Number	Date Prepared	Date Analyzed	Analyst	Data Qualifiers
Ethylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Freon 113	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Hexachlorobutadiene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Isopropylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m,p-Xylene	ND	ug/l	1.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
m-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methyl tert-butyl ether (MTBE)	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Methylene chloride	**1.3**	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Naphthalene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
n-Propylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
o-Xylene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Dichlorobenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
p-Isopropyltoluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
sec-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Styrene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tert-amyl methyl ether	ND	ug/l	3.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
tert-Butylbenzene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Tetrachloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Toluene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,2-Dichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
trans-1,3-Dichloropropene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichloroethene	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Trichlorofluoromethane	ND	ug/l	5.0	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Vinyl chloride	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Xylenes (total)	ND	ug/l	0.50	1	EPA 524.2	W8E0889	05/22/08	05/22/08	mdt	
Surrogate: 1,2-Dichlorobenzene-d4	99	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	
Surrogate: 4-Bromofluorobenzene	99	%	*70-130*		*EPA 524.2*	*W8E0889*	*05/22/08*	*05/22/08*	mdt	

QUALITY CONTROL SECTION

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1018 - EPA 300.0/300.1										
Blank (W8E1018-BLK1)				Analyzed: 05/22/08						
Bromide	ND	0.50	mg/l							
Chloride	ND	0.50	mg/l							
Nitrate as N	ND	110	ug/l							
Nitrite as N	ND	150	ug/l							
Sulfate as SO4	ND	0.50	mg/l							
LCS (W8E1018-BS1)				Analyzed: 05/22/08						
Bromide	424	25	mg/l	400		106	90-110			
Chloride	198	25	mg/l	200		99	90-110			
Nitrate as N	88800	5600	ug/l	90300		98	90-110			
Nitrite as N	29200	7600	ug/l	30400		96	90-110			
Sulfate as SO4	389	25	mg/l	400		97	90-110			
Matrix Spike (W8E1018-MS1)	**Source: 8052109-02**			Analyzed: 05/23/08						
Bromide	43.2	2.5	mg/l	40.0	0.171	108	83-113			
Chloride	45.1	2.5	mg/l	20.0	26.4	94	72-118			
Nitrate as N	12500	560	ug/l	9030	3580	98	80-107			
Nitrite as N	2950	760	ug/l	3040	ND	97	86-111			
Sulfate as SO4	76.5	2.5	mg/l	40.0	40.0	91	84-114			
Matrix Spike (W8E1018-MS2)	**Source: 8052107-01**			Analyzed: 05/23/08						
Bromide	428	25	mg/l	400	0.249	107	83-113			
Chloride	575	25	mg/l	200	366	104	72-118			
Nitrate as N	90800	5600	ug/l	90300	733	100	80-107			
Nitrite as N	31100	7600	ug/l	30400	96.0	102	86-111			
Sulfate as SO4	794	25	mg/l	400	404	98	84-114			
Matrix Spike Dup (W8E1018-MSD1)	**Source: 8052109-02**			Analyzed: 05/23/08						
Bromide	43.0	2.5	mg/l	40.0	0.171	107	83-113	0.4	20	
Chloride	45.0	2.5	mg/l	20.0	26.4	93	72-118	0.3	20	
Nitrate as N	12400	560	ug/l	9030	3580	98	80-107	0.08	20	
Nitrite as N	2940	760	ug/l	3040	ND	97	86-111	0.3	20	
Sulfate as SO4	76.8	2.5	mg/l	40.0	40.0	92	84-114	0.4	20	

Anions by EPA Method 300.0/300.1/326 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1018 - EPA 300.0/300.1										
Matrix Spike Dup (W8E1018-MSD2)	**Source: 8052107-01**		Analyzed: 05/23/08							
Bromide	427	25	mg/l	400	0.249	107	83-113	0.1	20	
Chloride	580	25	mg/l	200	366	107	72-118	0.9	20	
Nitrate as N	90600	5600	ug/l	90300	733	100	80-107	0.3	20	
Nitrite as N	31600	7600	ug/l	30400	96.0	104	86-111	2	20	
Sulfate as SO4	801	25	mg/l	400	404	99	84-114	0.9	20	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0812 - General Preparation										
Blank (W8E0812-BLK1)				Analyzed: 05/21/08						
Total Dissolved Solids	ND	10	mg/l							
LCS (W8E0812-BS1)				Analyzed: 05/21/08						
Total Dissolved Solids	792	10	mg/l	824		96	91-104			
Duplicate (W8E0812-DUP1)		**Source: 8052109-07**		Analyzed: 05/21/08						
Total Dissolved Solids	ND	10	mg/l		ND				5	
Batch W8E1009 - SM5310										
Blank (W8E1009-BLK1)				Analyzed: 05/27/08						
Total Organic Carbon (TOC)	ND	0.30	mg/l							
LCS (W8E1009-BS1)				Analyzed: 05/27/08						
Total Organic Carbon (TOC)	4.80	0.30	mg/l	5.00		96	90-110			
Matrix Spike (W8E1009-MS1)		**Source: 8052109-07**		Analyzed: 05/27/08						
Total Organic Carbon (TOC)	4.98	0.30	mg/l	5.00	0.108	97	84-107			
Matrix Spike Dup (W8E1009-MSD1)		**Source: 8052109-07**		Analyzed: 05/27/08						
Total Organic Carbon (TOC)	4.89	0.30	mg/l	5.00	0.108	96	84-107	2	20	
Batch W8E1056 - SM5310										
Blank (W8E1056-BLK1)				Analyzed: 05/28/08						
Dissolved Organic Carbon	ND	0.30	mg/l							

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1056 - SM5310										
LCS (W8E1056-BS1)				Analyzed: 05/28/08						
Dissolved Organic Carbon	4.83	0.30	mg/l	5.00		97	80-120			
LCS Dup (W8E1056-BSD1)				Analyzed: 05/28/08						
Dissolved Organic Carbon	4.87	0.30	mg/l	5.00		97	80-120	0.8	20	
Batch W8E1066 - General Preparation										
Blank (W8E1066-BLK1)				Analyzed: 06/03/08						
Total Cyanide	ND	0.0050	mg/l							
LCS (W8E1066-BS1)				Analyzed: 06/03/08						
Total Cyanide	0.0515	0.0050	mg/l	0.0500		103	87-115			
Matrix Spike (W8E1066-MS1)		**Source: 8052157-01**		Analyzed: 06/03/08						
Total Cyanide	0.0538	0.0050	mg/l	0.0500	ND	108	80-117			
Matrix Spike (W8E1066-MS2)		**Source: 8052158-01**		Analyzed: 06/03/08						
Total Cyanide	0.0544	0.0050	mg/l	0.0500	0.00302	103	80-117			
Matrix Spike Dup (W8E1066-MSD1)		**Source: 8052157-01**		Analyzed: 06/03/08						
Total Cyanide	0.0514	0.0050	mg/l	0.0500	ND	103	80-117	5	20	
Matrix Spike Dup (W8E1066-MSD2)		**Source: 8052158-01**		Analyzed: 06/03/08						
Total Cyanide	0.0559	0.0050	mg/l	0.0500	0.00302	106	80-117	3	20	
Batch W8E1146 - General Preparation										
Blank (W8E1146-BLK1)				Analyzed: 05/30/08						
Alkalinity as CaCO3	4.39	2.0	mg/l							B-06
Bicarbonate Alkalinity as HCO3	5.36	2.0	mg/l							B-06
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l							B-06
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l							B-06

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Conventional Chemistry/Physical Parameters by APHA/EPA/ASTM Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1146 - General Preparation										
LCS (W8E1146-BS1)				Analyzed: 05/30/08						
Alkalinity as CaCO3	46.1	2.0	mg/l	45.3		102	94-108			
Bicarbonate Alkalinity as HCO3	56.2	2.0	mg/l	55.3		102	94-108			
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Duplicate (W8E1146-DUP1)		**Source: 8052109-01**		Analyzed: 05/30/08						
Alkalinity as CaCO3	423	2.0	mg/l		422			0.2	15	
Bicarbonate Alkalinity as HCO3	516	2.0	mg/l		515			0.2	15	
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Batch W8F0092 - General Preparation										
Blank (W8F0092-BLK1)				Analyzed: 05/30/08						
Alkalinity as CaCO3	ND	2.0	mg/l							
Bicarbonate Alkalinity as HCO3	ND	2.0	mg/l							
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l							
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l							
LCS (W8F0092-BS1)				Analyzed: 05/30/08						
Alkalinity as CaCO3	46.2	2.0	mg/l	45.3		102	94-108			
Bicarbonate Alkalinity as HCO3	56.4	2.0	mg/l	55.3		102	94-108			
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l	0.00			0-200			
Duplicate (W8F0092-DUP1)		**Source: 8051935-02**		Analyzed: 05/30/08						
Alkalinity as CaCO3	24.1	2.0	mg/l		24.1			0	15	
Bicarbonate Alkalinity as HCO3	29.4	2.0	mg/l		29.4			0	15	
Carbonate Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	
Hydroxide Alkalinity as CaCO3	ND	2.0	mg/l		0.00				200	

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1052 - EPA 500 Series										
Blank (W8E1052-BLK1)				Analyzed: 05/29/08						
Surrogate. 2,3-Dibromopropionic acid	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
Bromochloroacetic acid (bcaa)	ND	1.0	ug/l							
Dibromoacetic acid (dbaa)	ND	1.0	ug/l							
Dichloroacetic acid (dcaa)	ND	1.0	ug/l							
Monobromoacetic acid (mbaa)	ND	1.0	ug/l							
Monochloroacetic acid (mcaa)	ND	2.0	ug/l							
Total HAA5	ND	5.0	ug/l							
Trichloroacetic acid (tcaa)	ND	1.0	ug/l							
LCS (W8E1052-BS1)				Analyzed: 05/29/08						
Surrogate: 2,3-Dibromopropionic acid	*10.6*		*ug/l*	*10.0*		*106*	*70-130*			
Bromochloroacetic acid (bcaa)	11.0	1.0	ug/l	10.0		110	70-130			
Dibromoacetic acid (dbaa)	11.1	1.0	ug/l	10.0		111	70-130			
Dichloroacetic acid (dcaa)	12.1	1.0	ug/l	10.0		121	70-130			
Monobromoacetic acid (mbaa)	12.3	1.0	ug/l	10.0		123	70-130			
Monochloroacetic acid (mcaa)	11.1	2.0	ug/l	10.0		111	70-130			
Trichloroacetic acid (tcaa)	10.1	1.0	ug/l	10.0		101	70-130			
Matrix Spike (W8E1052-MS1)	**Source: 8051606-01**			Analyzed: 05/29/08						
Surrogate: 2,3-Dibromopropionic acid	*10.3*		*ug/l*	*10.0*		*103*	*70-130*			
Bromochloroacetic acid (bcaa)	10.7	1.0	ug/l	10.0	ND	107	70-130			
Dibromoacetic acid (dbaa)	10.8	1.0	ug/l	10.0	ND	108	70-130			
Dichloroacetic acid (dcaa)	12.0	1.0	ug/l	10.0	ND	120	70-130			
Monobromoacetic acid (mbaa)	11.7	1.0	ug/l	10.0	ND	117	70-130			
Monochloroacetic acid (mcaa)	11.1	2.0	ug/l	10.0	ND	111	70-130			
Trichloroacetic acid (tcaa)	9.81	1.0	ug/l	10.0	ND	98	70-130			
Matrix Spike (W8E1052-MS2)	**Source: 8052109-01**			Analyzed: 05/29/08						
Surrogate: 2,3-Dibromopropionic acid	*9.48*		*ug/l*	*10.0*		*95*	*70-130*			
Bromochloroacetic acid (bcaa)	10.1	1.0	ug/l	10.0	ND	101	70-130			
Dibromoacetic acid (dbaa)	10.1	1.0	ug/l	10.0	ND	101	70-130			
Dichloroacetic acid (dcaa)	11.3	1.0	ug/l	10.0	ND	113	70-130			
Monobromoacetic acid (mbaa)	11.3	1.0	ug/l	10.0	ND	113	70-130			

HAAs by EPA 552.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1052 - EPA 500 Series										
Matrix Spike (W8E1052-MS2)	**Source: 8052109-01**			Analyzed: 05/29/08						
Monochloroacetic acid (mcaa)	11.0	2.0	ug/l	10.0	ND	110	70-130			
Trichloroacetic acid (tcaa)	8.96	1.0	ug/l	10.0	ND	90	70-130			
Matrix Spike Dup (W8E1052-MSD1)	**Source: 8051606-01**			Analyzed: 06/02/08						
Surrogate. 2,3-Dibromopropionic acid	*10.0*		*ug/l*	*10.0*		*100*	*70-130*			
Bromochloroacetic acid (bcaa)	10.5	1.0	ug/l	10.0	ND	105	70-130	2	30	
Dibromoacetic acid (dbaa)	10.6	1.0	ug/l	10.0	ND	106	70-130	2	30	
Dichloroacetic acid (dcaa)	11.7	1.0	ug/l	10.0	ND	117	70-130	2	30	
Monobromoacetic acid (mbaa)	11.9	1.0	ug/l	10.0	ND	119	70-130	2	30	
Monochloroacetic acid (mcaa)	11.2	2.0	ug/l	10.0	ND	112	70-130	1	30	
Trichloroacetic acid (tcaa)	9.66	1.0	ug/l	10.0	ND	97	70-130	2	30	
Matrix Spike Dup (W8E1052-MSD2)	**Source: 8052109-01**			Analyzed: 05/29/08						
Surrogate: 2,3-Dibromopropionic acid	*10.1*		*ug/l*	*10.0*		*101*	*70-130*			
Bromochloroacetic acid (bcaa)	10.8	1.0	ug/l	10.0	ND	108	70-130	7	30	
Dibromoacetic acid (dbaa)	10.9	1.0	ug/l	10.0	ND	109	70-130	7	30	
Dichloroacetic acid (dcaa)	12.0	1.0	ug/l	10.0	ND	120	70-130	7	30	
Monobromoacetic acid (mbaa)	12.6	1.0	ug/l	10.0	ND	126	70-130	11	30	
Monochloroacetic acid (mcaa)	11.4	2.0	ug/l	10.0	ND	114	70-130	4	30	
Trichloroacetic acid (tcaa)	9.78	1.0	ug/l	10.0	ND	98	70-130	9	30	

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1039 - EPA 200.2										
Blank (W8E1039-BLK1)				Analyzed: 06/03/08						
Calcium	ND	0.10	mg/l							
Magnesium	ND	0.10	mg/l							
Potassium	ND	0.10	mg/l							
Sodium	ND	0.50	mg/l							
Total Boron	ND	10	ug/l							
LCS (W8E1039-BS1)				Analyzed: 06/03/08						
Calcium	49.4	0.10	mg/l	50.2		98	85-115			
Magnesium	49.3	0.10	mg/l	50.2		98	85-115			
Potassium	50.0	0.10	mg/l	52.0		96	85-115			
Sodium	49.3	0.50	mg/l	50.2		98	85-115			
Total Boron	188	10	ug/l	200		94	85-115			
Matrix Spike (W8E1039-MS1)		**Source: 8052109-06**		Analyzed: 06/03/08						
Calcium	103	0.10	mg/l	50.2	53.0	99	70-130			
Magnesium	79.4	0.10	mg/l	50.2	29.0	101	70-130			
Potassium	65.0	0.10	mg/l	52.0	15.1	96	70-130			
Sodium	184	0.50	mg/l	50.2	135	99	70-130			
Total Boron	685	10	ug/l	200	483	101	70-130			
Matrix Spike (W8E1039-MS2)		**Source: 8052109-07**		Analyzed: 06/03/08						
Calcium	49.3	0.10	mg/l	50.2	0.0118	98	70-130			
Magnesium	49.3	0.10	mg/l	50.2	ND	98	70-130			
Potassium	49.7	0.10	mg/l	52.0	0.0797	95	70-130			
Sodium	48.7	0.50	mg/l	50.2	ND	97	70-130			
Total Boron	185	10	ug/l	200	ND	92	70-130			
Matrix Spike Dup (W8E1039-MSD1)		**Source: 8052109-06**		Analyzed: 06/03/08						
Calcium	102	0.10	mg/l	50.2	53.0	98	70-130	0.4	30	
Magnesium	78.7	0.10	mg/l	50.2	29.0	99	70-130	1	30	
Potassium	65.7	0.10	mg/l	52.0	15.1	97	70-130	1	30	
Sodium	180	0.50	mg/l	50.2	135	91	70-130	2	30	
Total Boron	678	10	ug/l	200	483	98	70-130	1	30	

Metals by EPA 200 Series Methods - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E1039 - EPA 200.2										
Matrix Spike Dup (W8E1039-MSD2)		**Source: 8052109-07**		Analyzed: 06/03/08						
Calcium	48 9	0 10	mg/l	50 2	0 0118	97	70-130	0 7	30	
Magnesium	49 0	0 10	mg/l	50 2	ND	97	70-130	0 7	30	
Potassium	50 1	0 10	mg/l	52 0	0 0797	96	70-130	0 8	30	
Sodium	48 3	0 50	mg/l	50 2	ND	96	70-130	0 8	30	
Total Boron	185	10	ug/l	200	ND	93	70-130	0 1	30	

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Perchlorate by EPA 314.0 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8F0082 - EPA 314.0, dir. inj.										
Blank (W8F0082-BLK1)				Analyzed: 06/02/08						
Perchlorate	ND	4.0	ug/l							
Matrix Spike (W8F0082-MS1)		**Source: 8052109-01**		Analyzed: 06/05/08						
Perchlorate	24.2	4.0	ug/l	20.0	4.35	99	80-120			
Matrix Spike Dup (W8F0082-MSD1)		**Source: 8052109-01**		Analyzed: 06/05/08						
Perchlorate	23.4	4.0	ug/l	20.0	4.35	95	80-120	3	15	
Batch W8F0210 - EPA 314.0, dir. inj.										
Blank (W8F0210-BLK1)				Analyzed: 06/04/08						
Perchlorate	ND	4.0	ug/l							
LCS (W8F0210-BS1)				Analyzed: 06/04/08						
Perchlorate	18.7	4.0	ug/l	20.0		93	85-115			
Matrix Spike (W8F0210-MS1)		**Source: 8052109-01**		Analyzed: 06/04/08						
Perchlorate	23.9	4.0	ug/l	20.0	4.35	98	80-120			
Matrix Spike Dup (W8F0210-MSD1)		**Source: 8052109-01**		Analyzed: 06/04/08						
Perchlorate	21.2	4.0	ug/l	20.0	4.35	84	80-120	12	15	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8E0830 - EPA 524.2

Blank (W8E0830-BLK1) Analyzed: 05/21/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Surrogate: 1,2-Dichlorobenzene-d4	*9.99*		*ug/l*	*10.0*		*100*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.80*		*ug/l*	*10.0*		*98*	*70-130*			
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
1,1-Dichloropropene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3 Dichloropropene (Total)	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	0.50	ug/l							
2-Butanone	ND	5.0	ug/l							
2-Chloroethyl vinyl ether	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
4-Methyl-2-pentanone	ND	5.0	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	0.50	ug/l							
Bromomethane	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0830 - EPA 524.2										
Blank (W8E0830-BLK1)				Analyzed: 05/21/08						
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	0.50	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l							
Di-isopropyl ether	ND	3.0	ug/l							
Ethyl tert-butyl ether	ND	3.0	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Freon 113	ND	5.0	ug/l							
Hexachlorobutadiene	ND	0.50	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
m,p-Xylene	ND	1.0	ug/l							
m-Dichlorobenzene	ND	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	3.0	ug/l							
Methylene chloride	ND	0.50	ug/l							
Naphthalene	ND	0.50	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
o-Dichlorobenzene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
p-Dichlorobenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
Tert-amyl methyl ether	ND	3.0	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0830 - EPA 524.2										
Blank (W8E0830-BLK1)				Analyzed: 05/21/08						
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes (total)	ND	0.50	ug/l							
LCS (W8E0830-BS1)				Analyzed: 05/21/08						
Surrogate: 1,2-Dichlorobenzene-d4	*10.6*		*ug/l*	*10.0*		*106*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
1,1,1,2-Tetrachloroethane	5.77	0.50	ug/l	6.00		96	70-130			
1,1,1-Trichloroethane	6.01	0.50	ug/l	6.00		100	70-130			
1,1,2,2-Tetrachloroethane	5.95	0.50	ug/l	6.00		99	70-130			
1,1,2-Trichloroethane	5.81	0.50	ug/l	6.00		97	70-130			
1,1-Dichloroethane	6.46	0.50	ug/l	6.00		108	70-130			
1,1-Dichloroethene	6.60	0.50	ug/l	6.00		110	70-130			
1,1-Dichloropropene	6.51	0.50	ug/l	6.00		108	70-130			
1,2,3-Trichlorobenzene	6.51	0.50	ug/l	6.00		108	70-130			
1,2,3-Trichloropropane	5.97	0.50	ug/l	6.00		100	70-130			
1,2,4-Trichlorobenzene	6.18	0.50	ug/l	6.00		103	70-130			
1,2,4-Trimethylbenzene	6.22	0.50	ug/l	6.00		104	70-130			
1,2-Dichloroethane	5.95	0.50	ug/l	6.00		99	70-130			
1,2-Dichloropropane	6.33	0.50	ug/l	6.00		106	70-130			
1,3,5-Trimethylbenzene	6.31	0.50	ug/l	6.00		105	70-130			
1,3-Dichloropropane	5.91	0.50	ug/l	6.00		98	70-130			
2,2-Dichloropropane	6.88	0.50	ug/l	6.00		115	70-130			
2-Butanone	7.44	5.0	ug/l	6.00		124	70-130			
2-Chloroethyl vinyl ether	6.04	1.0	ug/l	6.00		101	70-130			
2-Chlorotoluene	6.23	0.50	ug/l	6.00		104	70-130			
2-Hexanone	6.24	5.0	ug/l	6.00		104	70-130			
4-Chlorotoluene	6.23	0.50	ug/l	6.00		104	70-130			
4-Methyl-2-pentanone	6.14	5.0	ug/l	6.00		102	70-130			
Benzene	6.54	0.50	ug/l	6.00		109	70-130			
Bromobenzene	6.14	0.50	ug/l	6.00		102	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8E0830 - EPA 524.2

LCS (W8E0830-BS1) Analyzed: 05/21/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Bromochloromethane	6.23	0.50	ug/l	6.00		104	70-130			
Bromodichloromethane	5.87	0.50	ug/l	6.00		98	70-130			
Bromoform	5.46	0.50	ug/l	6.00		91	70-130			
Bromomethane	7.38	0.50	ug/l	6.00		123	70-130			
Carbon tetrachloride	6.02	0.50	ug/l	6.00		100	70-130			
Chlorobenzene	6.08	0.50	ug/l	6.00		101	70-130			
Chloroethane	6.80	0.50	ug/l	6.00		113	70-130			
Chloroform	5.75	0.50	ug/l	6.00		96	70-130			
Chloromethane	8.13	0.50	ug/l	6.00		136	70-130			Q-08
cis-1,2-Dichloroethene	6.51	0.50	ug/l	6.00		108	70-130			
cis-1,3-Dichloropropene	6.31	0.50	ug/l	6.00		105	70-130			
Dibromochloromethane	5.53	0.50	ug/l	6.00		92	70-130			
Dibromomethane	5.99	0.50	ug/l	6.00		100	70-130			
Dichlorodifluoromethane (Freon 12)	5.86	0.50	ug/l	6.00		98	70-130			
Di-isopropyl ether	6.53	3.0	ug/l	6.00		109	70-130			
Ethyl tert-butyl ether	6.10	3.0	ug/l	6.00		102	70-130			
Ethylbenzene	6.50	0.50	ug/l	6.00		108	70-130			
Freon 113	6.86	5.0	ug/l	6.00		114	70-130			
Hexachlorobutadiene	6.05	0.50	ug/l	6.00		101	70-130			
Isopropylbenzene	6.35	0.50	ug/l	6.00		106	70-130			
m,p-Xylene	12.9	1.0	ug/l	12.0		108	70-130			
m-Dichlorobenzene	5.84	0.50	ug/l	6.00		97	70-130			
Methyl tert-butyl ether (MTBE)	5.77	3.0	ug/l	6.00		96	70-130			
Methylene chloride	5.90	0.50	ug/l	6.00		98	70-130			
Naphthalene	6.63	0.50	ug/l	6.00		110	70-130			
n-Butylbenzene	6.60	0.50	ug/l	6.00		110	70-130			
n-Propylbenzene	6.32	0.50	ug/l	6.00		105	70-130			
o-Dichlorobenzene	5.76	0.50	ug/l	6.00		96	70-130			
o-Xylene	6.33	0.50	ug/l	6.00		106	70-130			
p-Dichlorobenzene	5.86	0.50	ug/l	6.00		98	70-130			
p-Isopropyltoluene	6.33	0.50	ug/l	6.00		106	70-130			
sec-Butylbenzene	6.32	0.50	ug/l	6.00		105	70-130			
Styrene	6.30	0.50	ug/l	6.00		105	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0830 - EPA 524.2										
LCS (W8E0830-BS1)				Analyzed: 05/21/08						
Tert-amyl methyl ether	5.90	3.0	ug/l	6.00		98	70-130			
tert-Butylbenzene	6.22	0.50	ug/l	6.00		104	70-130			
Tetrachloroethene	6.06	0.50	ug/l	6.00		101	70-130			
Toluene	6.50	0.50	ug/l	6.00		108	70-130			
trans-1,2-Dichloroethene	6.82	0.50	ug/l	6.00		114	70-130			
trans-1,3-Dichloropropene	6.19	0.50	ug/l	6.00		103	70-130			
Trichloroethene	5.98	0.50	ug/l	6.00		100	70-130			
Trichlorofluoromethane	6.05	5.0	ug/l	6.00		101	70-130			
Vinyl chloride	7.45	0.50	ug/l	6.00		124	70-130			
LCS Dup (W8E0830-BSD1)				Analyzed: 05/21/08						
Surrogate: 1,2-Dichlorobenzene-d4	*10.5*		*ug/l*	*10.0*		*105*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.4*		*ug/l*	*10.0*		*104*	*70-130*			
1,1,1,2-Tetrachloroethane	5.65	0.50	ug/l	6.00		94	70-130	2	30	
1,1,1-Trichloroethane	6.12	0.50	ug/l	6.00		102	70-130	2	30	
1,1,2,2-Tetrachloroethane	5.84	0.50	ug/l	6.00		97	70-130	2	30	
1,1,2-Trichloroethane	5.61	0.50	ug/l	6.00		94	70-130	4	30	
1,1-Dichloroethane	6.46	0.50	ug/l	6.00		108	70-130	0	30	
1,1-Dichloroethene	6.80	0.50	ug/l	6.00		113	70-130	3	30	
1,1-Dichloropropene	6.65	0.50	ug/l	6.00		111	70-130	2	30	
1,2,3-Trichlorobenzene	6.66	0.50	ug/l	6.00		111	70-130	2	30	
1,2,3-Trichloropropane	5.71	0.50	ug/l	6.00		95	70-130	4	30	
1,2,4-Trichlorobenzene	6.20	0.50	ug/l	6.00		103	70-130	0.3	30	
1,2,4-Trimethylbenzene	6.25	0.50	ug/l	6.00		104	70-130	0.5	30	
1,2-Dichloroethane	5.91	0.50	ug/l	6.00		98	70-130	0.7	30	
1,2-Dichloropropane	6.31	0.50	ug/l	6.00		105	70-130	0.3	30	
1,3,5-Trimethylbenzene	6.31	0.50	ug/l	6.00		105	70-130	0	30	
1,3-Dichloropropane	5.90	0.50	ug/l	6.00		98	70-130	0.2	30	
2,2-Dichloropropane	6.92	0.50	ug/l	6.00		115	70-130	0.6	30	
2-Butanone	7.21	5.0	ug/l	6.00		120	70-130	3	30	
2-Chloroethyl vinyl ether	6.22	1.0	ug/l	6.00		104	70-130	3	30	
2-Chlorotoluene	6.20	0.50	ug/l	6.00		103	70-130	0.5	30	
2-Hexanone	6.21	5.0	ug/l	6.00		104	70-130	0.5	30	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0830 - EPA 524.2										
LCS Dup (W8E0830-BSD1)				Analyzed: 05/21/08						
4-Chlorotoluene	6.18	0.50	ug/l	6.00		103	70-130	0.8	30	
4-Methyl-2-pentanone	6.04	5.0	ug/l	6.00		101	70-130	2	30	
Benzene	6.50	0.50	ug/l	6.00		108	70-130	0.6	30	
Bromobenzene	6.05	0.50	ug/l	6.00		101	70-130	1	30	
Bromochloromethane	6.10	0.50	ug/l	6.00		102	70-130	2	30	
Bromodichloromethane	5.81	0.50	ug/l	6.00		97	70-130	1	30	
Bromoform	5.52	0.50	ug/l	6.00		92	70-130	1	30	
Bromomethane	7.45	0.50	ug/l	6.00		124	70-130	0.9	30	
Carbon tetrachloride	6.22	0.50	ug/l	6.00		104	70-130	3	30	
Chlorobenzene	6.07	0.50	ug/l	6.00		101	70-130	0.2	30	
Chloroethane	6.80	0.50	ug/l	6.00		113	70-130	0	30	
Chloroform	5.69	0.50	ug/l	6.00		95	70-130	1	30	
Chloromethane	8.08	0.50	ug/l	6.00		135	70-130	0.6	30	Q-08
cis-1,2-Dichloroethene	6.47	0.50	ug/l	6.00		108	70-130	0.6	30	
cis-1,3-Dichloropropene	6.28	0.50	ug/l	6.00		105	70-130	0.5	30	
Dibromochloromethane	5.43	0.50	ug/l	6.00		90	70-130	2	30	
Dibromomethane	5.94	0.50	ug/l	6.00		99	70-130	0.8	30	
Dichlorodifluoromethane (Freon 12)	5.93	0.50	ug/l	6.00		99	70-130	1	30	
Di-isopropyl ether	6.51	3.0	ug/l	6.00		108	70-130	0.3	30	
Ethyl tert-butyl ether	6.12	3.0	ug/l	6.00		102	70-130	0.3	30	
Ethylbenzene	6.50	0.50	ug/l	6.00		108	70-130	0	30	
Freon 113	6.44	5.0	ug/l	6.00		107	70-130	6	30	
Hexachlorobutadiene	6.16	0.50	ug/l	6.00		103	70-130	2	30	
Isopropylbenzene	6.42	0.50	ug/l	6.00		107	70-130	1	30	
m,p-Xylene	12.8	1.0	ug/l	12.0		107	70-130	0.5	30	
m-Dichlorobenzene	5.76	0.50	ug/l	6.00		96	70-130	1	30	
Methyl tert-butyl ether (MTBE)	5.77	3.0	ug/l	6.00		96	70-130	0	30	
Methylene chloride	5.86	0.50	ug/l	6.00		98	70-130	0.7	30	
Naphthalene	6.95	0.50	ug/l	6.00		116	70-130	5	30	
n-Butylbenzene	6.66	0.50	ug/l	6.00		111	70-130	0.9	30	
n-Propylbenzene	6.37	0.50	ug/l	6.00		106	70-130	0.8	30	
o-Dichlorobenzene	5.71	0.50	ug/l	6.00		95	70-130	0.9	30	
o-Xylene	6.34	0.50	ug/l	6.00		106	70-130	0.2	30	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0830 - EPA 524.2										
LCS Dup (W8E0830-BSD1)				Analyzed: 05/21/08						
p-Dichlorobenzene	5.80	0.50	ug/l	6.00		97	70-130	1	30	
p-Isopropyltoluene	6.39	0.50	ug/l	6.00		106	70-130	0.9	30	
sec-Butylbenzene	6.40	0.50	ug/l	6.00		107	70-130	1	30	
Styrene	6.24	0.50	ug/l	6.00		104	70-130	1	30	
Tert-amyl methyl ether	5.85	3.0	ug/l	6.00		98	70-130	0.9	30	
tert-Butylbenzene	6.22	0.50	ug/l	6.00		104	70-130	0	30	
Tetrachloroethene	6.10	0.50	ug/l	6.00		102	70-130	0.7	30	
Toluene	6.53	0.50	ug/l	6.00		109	70-130	0.5	30	
trans-1,2-Dichloroethene	6.94	0.50	ug/l	6.00		116	70-130	2	30	
trans-1,3-Dichloropropene	6.21	0.50	ug/l	6.00		104	70-130	0.3	30	
Trichloroethene	6.01	0.50	ug/l	6.00		100	70-130	0.5	30	
Trichlorofluoromethane	6.22	5.0	ug/l	6.00		104	70-130	3	30	
Vinyl chloride	7.56	0.50	ug/l	6.00		126	70-130	1	30	
Batch W8E0889 - EPA 524.2										
Blank (W8E0889-BLK1)				Analyzed: 05/22/08						
Surrogate: 1,2-Dichlorobenzene-d4	*9.46*		*ug/l*	*10.0*		*95*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*9.71*		*ug/l*	*10.0*		*97*	*70-130*			
1,1,1,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,1-Trichloroethane	ND	0.50	ug/l							
1,1,2,2-Tetrachloroethane	ND	0.50	ug/l							
1,1,2-Trichloroethane	ND	0.50	ug/l							
1,1-Dichloroethane	ND	0.50	ug/l							
1,1-Dichloroethene	ND	0.50	ug/l							
1,1-Dichloropropene	ND	0.50	ug/l							
1,2,3-Trichlorobenzene	ND	0.50	ug/l							
1,2,3-Trichloropropane	ND	0.50	ug/l							
1,2,4-Trichlorobenzene	ND	0.50	ug/l							
1,2,4-Trimethylbenzene	ND	0.50	ug/l							
1,2-Dichloroethane	ND	0.50	ug/l							
1,2-Dichloropropane	ND	0.50	ug/l							
1,3 Dichloropropene (Total)	ND	0.50	ug/l							
1,3,5-Trimethylbenzene	ND	0.50	ug/l							

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0889 - EPA 524.2										
Blank (W8E0889-BLK1)				Analyzed: 05/22/08						
1,3-Dichloropropane	ND	0.50	ug/l							
2,2-Dichloropropane	ND	0.50	ug/l							
2-Butanone	ND	5.0	ug/l							
2-Chloroethyl vinyl ether	ND	1.0	ug/l							
2-Chlorotoluene	ND	0.50	ug/l							
2-Hexanone	ND	5.0	ug/l							
4-Chlorotoluene	ND	0.50	ug/l							
4-Methyl-2-pentanone	ND	5.0	ug/l							
Benzene	ND	0.50	ug/l							
Bromobenzene	ND	0.50	ug/l							
Bromochloromethane	ND	0.50	ug/l							
Bromodichloromethane	ND	0.50	ug/l							
Bromoform	ND	0.50	ug/l							
Bromomethane	ND	0.50	ug/l							
Carbon tetrachloride	ND	0.50	ug/l							
Chlorobenzene	ND	0.50	ug/l							
Chloroethane	ND	0.50	ug/l							
Chloroform	ND	0.50	ug/l							
Chloromethane	ND	0.50	ug/l							
cis-1,2-Dichloroethene	ND	0.50	ug/l							
cis-1,3-Dichloropropene	ND	0.50	ug/l							
Dibromochloromethane	ND	0.50	ug/l							
Dibromomethane	ND	0.50	ug/l							
Dichlorodifluoromethane (Freon 12)	ND	0.50	ug/l							
Di-isopropyl ether	ND	3.0	ug/l							
Ethyl tert-butyl ether	ND	3.0	ug/l							
Ethylbenzene	ND	0.50	ug/l							
Freon 113	ND	5.0	ug/l							
Hexachlorobutadiene	ND	0.50	ug/l							
Isopropylbenzene	ND	0.50	ug/l							
m,p-Xylene	ND	1.0	ug/l							
m-Dichlorobenzene	ND	0.50	ug/l							
Methyl tert-butyl ether (MTBE)	ND	3.0	ug/l							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0889 - EPA 524.2										
Blank (W8E0889-BLK1)				Analyzed: 05/22/08						
Methylene chloride	ND	0.50	ug/l							
Naphthalene	ND	0.50	ug/l							
n-Butylbenzene	ND	0.50	ug/l							
n-Propylbenzene	ND	0.50	ug/l							
o-Dichlorobenzene	ND	0.50	ug/l							
o-Xylene	ND	0.50	ug/l							
p-Dichlorobenzene	ND	0.50	ug/l							
p-Isopropyltoluene	ND	0.50	ug/l							
sec-Butylbenzene	ND	0.50	ug/l							
Styrene	ND	0.50	ug/l							
Tert-amyl methyl ether	ND	3.0	ug/l							
tert-Butylbenzene	ND	0.50	ug/l							
Tetrachloroethene	ND	0.50	ug/l							
Toluene	ND	0.50	ug/l							
trans-1,2-Dichloroethene	ND	0.50	ug/l							
trans-1,3-Dichloropropene	ND	0.50	ug/l							
Trichloroethene	ND	0.50	ug/l							
Trichlorofluoromethane	ND	5.0	ug/l							
Vinyl chloride	ND	0.50	ug/l							
Xylenes (total)	ND	0.50	ug/l							
LCS (W8E0889-BS1)				Analyzed: 05/22/08						
Surrogate: 1,2-Dichlorobenzene-d4	*11.0*		*ug/l*	*10.0*		*110*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.8*		*ug/l*	*10.0*		*108*	*70-130*			
1,1,1,2-Tetrachloroethane	5.95	0.50	ug/l	6.00		99	70-130			
1,1,1-Trichloroethane	6.26	0.50	ug/l	6.00		104	70-130			
1,1,2,2-Tetrachloroethane	6.42	0.50	ug/l	6.00		107	70-130			
1,1,2-Trichloroethane	6.16	0.50	ug/l	6.00		103	70-130			
1,1-Dichloroethane	6.64	0.50	ug/l	6.00		111	70-130			
1,1-Dichloroethene	6.93	0.50	ug/l	6.00		116	70-130			
1,1-Dichloropropene	6.78	0.50	ug/l	6.00		113	70-130			
1,2,3-Trichlorobenzene	6.61	0.50	ug/l	6.00		110	70-130			
1,2,3-Trichloropropane	6.30	0.50	ug/l	6.00		105	70-130			

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8E0889 - EPA 524.2

LCS (W8E0889-BS1) Analyzed: 05/22/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
1,2,4-Trichlorobenzene	6.25	0.50	ug/l	6.00		104	70-130			
1,2,4-Trimethylbenzene	6.38	0.50	ug/l	6.00		106	70-130			
1,2-Dichloroethane	6.17	0.50	ug/l	6.00		103	70-130			
1,2-Dichloropropane	6.55	0.50	ug/l	6.00		109	70-130			
1,3,5-Trimethylbenzene	6.43	0.50	ug/l	6.00		107	70-130			
1,3-Dichloropropane	6.27	0.50	ug/l	6.00		104	70-130			
2,2-Dichloropropane	6.99	0.50	ug/l	6.00		116	70-130			
2-Butanone	7.85	5.0	ug/l	6.00		131	70-130			Q-08
2-Chloroethyl vinyl ether	6.52	1.0	ug/l	6.00		109	70-130			
2-Chlorotoluene	6.36	0.50	ug/l	6.00		106	70-130			
2-Hexanone	6.75	5.0	ug/l	6.00		112	70-130			
4-Chlorotoluene	6.35	0.50	ug/l	6.00		106	70-130			
4-Methyl-2-pentanone	6.77	5.0	ug/l	6.00		113	70-130			
Benzene	6.64	0.50	ug/l	6.00		111	70-130			
Bromobenzene	6.30	0.50	ug/l	6.00		105	70-130			
Bromochloromethane	6.50	0.50	ug/l	6.00		108	70-130			
Bromodichloromethane	6.08	0.50	ug/l	6.00		101	70-130			
Bromoform	5.91	0.50	ug/l	6.00		98	70-130			
Bromomethane	7.30	0.50	ug/l	6.00		122	70-130			
Carbon tetrachloride	6.35	0.50	ug/l	6.00		106	70-130			
Chlorobenzene	6.27	0.50	ug/l	6.00		104	70-130			
Chloroethane	6.97	0.50	ug/l	6.00		116	70-130			
Chloroform	5.89	0.50	ug/l	6.00		98	70-130			
Chloromethane	8.16	0.50	ug/l	6.00		136	70-130			Q-08
cis-1,2-Dichloroethene	6.62	0.50	ug/l	6.00		110	70-130			
cis-1,3-Dichloropropene	6.59	0.50	ug/l	6.00		110	70-130			
Dibromochloromethane	5.90	0.50	ug/l	6.00		98	70-130			
Dibromomethane	6.26	0.50	ug/l	6.00		104	70-130			
Dichlorodifluoromethane (Freon 12)	5.98	0.50	ug/l	6.00		100	70-130			
Di-isopropyl ether	6.86	3.0	ug/l	6.00		114	70-130			
Ethyl tert-butyl ether	6.46	3.0	ug/l	6.00		108	70-130			
Ethylbenzene	6.62	0.50	ug/l	6.00		110	70-130			
Freon 113	7.12	5.0	ug/l	6.00		119	70-130			

The results in this report apply to the samples analyzed in accordance with the chain of custody document This analytical report must be reproduced in its entirety

Locus Technologies
299 Fairchild Drive
Mountain View CA. 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Batch W8E0889 - EPA 524.2										
LCS (W8E0889-BS1)				Analyzed: 05/22/08						
Hexachlorobutadiene	6.11	0.50	ug/l	6.00		102	70-130			
Isopropylbenzene	6.47	0.50	ug/l	6.00		108	70-130			
m,p-Xylene	13.1	1.0	ug/l	12.0		110	70-130			
m-Dichlorobenzene	5.96	0.50	ug/l	6.00		99	70-130			
Methyl tert-butyl ether (MTBE)	6.15	3.0	ug/l	6.00		102	70-130			
Methylene chloride	6.01	0.50	ug/l	6.00		100	70-130			
Naphthalene	6.88	0.50	ug/l	6.00		115	70-130			
n-Butylbenzene	6.68	0.50	ug/l	6.00		111	70-130			
n-Propylbenzene	6.49	0.50	ug/l	6.00		108	70-130			
o-Dichlorobenzene	6.01	0.50	ug/l	6.00		100	70-130			
o-Xylene	6.45	0.50	ug/l	6.00		108	70-130			
p-Dichlorobenzene	6.04	0.50	ug/l	6.00		101	70-130			
p-Isopropyltoluene	6.46	0.50	ug/l	6.00		108	70-130			
sec-Butylbenzene	6.51	0.50	ug/l	6.00		108	70-130			
Styrene	6.47	0.50	ug/l	6.00		108	70-130			
Tert-amyl methyl ether	6.23	3.0	ug/l	6.00		104	70-130			
tert-Butylbenzene	6.34	0.50	ug/l	6.00		106	70-130			
Tetrachloroethene	6.21	0.50	ug/l	6.00		104	70-130			
Toluene	6.59	0.50	ug/l	6.00		110	70-130			
trans-1,2-Dichloroethene	7.02	0.50	ug/l	6.00		117	70-130			
trans-1,3-Dichloropropene	6.58	0.50	ug/l	6.00		110	70-130			
Trichloroethene	6.17	0.50	ug/l	6.00		103	70-130			
Trichlorofluoromethane	6.42	5.0	ug/l	6.00		107	70-130			
Vinyl chloride	7.73	0.50	ug/l	6.00		129	70-130			
LCS Dup (W8E0889-BSD1)				Analyzed: 05/22/08						
Surrogate: 1,2-Dichlorobenzene-d4	*11.1*		*ug/l*	*10.0*		*111*	*70-130*			
Surrogate: 4-Bromofluorobenzene	*10.8*		*ug/l*	*10.0*		*108*	*70-130*			
1,1,1,2-Tetrachloroethane	5.89	0.50	ug/l	6.00		98	70-130	1	30	
1,1,1-Trichloroethane	6.16	0.50	ug/l	6.00		103	70-130	2	30	
1,1,2,2-Tetrachloroethane	6.27	0.50	ug/l	6.00		104	70-130	2	30	
1.1.2-Trichloroethane	6.15	0.50	ug/l	6.00		102	70-130	0.2	30	
1,1-Dichloroethane	6.55	0.50	ug/l	6.00		109	70-130	1	30	

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Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8E0889 - EPA 524.2

LCS Dup (W8E0889-BSD1) Analyzed: 05/22/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
1,1-Dichloroethene	6.88	0.50	ug/l	6.00		115	70-130	0.7	30	
1,1-Dichloropropene	6.78	0.50	ug/l	6.00		113	70-130	0	30	
1,2,3-Trichlorobenzene	6.60	0.50	ug/l	6.00		110	70-130	0.2	30	
1,2,3-Trichloropropane	6.19	0.50	ug/l	6.00		103	70-130	2	30	
1,2,4-Trichlorobenzene	6.02	0.50	ug/l	6.00		100	70-130	4	30	
1,2,4-Trimethylbenzene	6.12	0.50	ug/l	6.00		102	70-130	4	30	
1,2-Dichloroethane	6.16	0.50	ug/l	6.00		103	70-130	0.2	30	
1,2-Dichloropropane	6.51	0.50	ug/l	6.00		108	70-130	0.6	30	
1,3,5-Trimethylbenzene	6.21	0.50	ug/l	6.00		104	70-130	3	30	
1,3-Dichloropropane	6.23	0.50	ug/l	6.00		104	70-130	0.6	30	
2,2-Dichloropropane	6.77	0.50	ug/l	6.00		113	70-130	3	30	
2-Butanone	7.88	5.0	ug/l	6.00		131	70-130	0.4	30	Q-08
2-Chloroethyl vinyl ether	6.69	1.0	ug/l	6.00		112	70-130	3	30	
2-Chlorotoluene	6.16	0.50	ug/l	6.00		103	70-130	3	30	
2-Hexanone	6.70	5.0	ug/l	6.00		112	70-130	0.7	30	
4-Chlorotoluene	6.21	0.50	ug/l	6.00		104	70-130	2	30	
4-Methyl-2-pentanone	6.88	5.0	ug/l	6.00		115	70-130	2	30	
Benzene	6.58	0.50	ug/l	6.00		110	70-130	0.9	30	
Bromobenzene	6.21	0.50	ug/l	6.00		104	70-130	1	30	
Bromochloromethane	6.51	0.50	ug/l	6.00		108	70-130	0.2	30	
Bromodichloromethane	6.00	0.50	ug/l	6.00		100	70-130	1	30	
Bromoform	5.90	0.50	ug/l	6.00		98	70-130	0.2	30	
Bromomethane	7.18	0.50	ug/l	6.00		120	70-130	2	30	
Carbon tetrachloride	6.26	0.50	ug/l	6.00		104	70-130	1	30	
Chlorobenzene	6.20	0.50	ug/l	6.00		103	70-130	1	30	
Chloroethane	6.87	0.50	ug/l	6.00		114	70-130	1	30	
Chloroform	5.84	0.50	ug/l	6.00		97	70-130	0.9	30	
Chloromethane	8.10	0.50	ug/l	6.00		135	70-130	0.7	30	Q-08
cis-1,2-Dichloroethene	6.67	0.50	ug/l	6.00		111	70-130	0.8	30	
cis-1,3-Dichloropropene	6.68	0.50	ug/l	6.00		111	70-130	1	30	
Dibromochloromethane	5.89	0.50	ug/l	6.00		98	70-130	0.2	30	
Dibromomethane	6.40	0.50	ug/l	6.00		107	70-130	2	30	
Dichlorodifluoromethane (Freon 12)	5.88	0.50	ug/l	6.00		98	70-130	2	30	

Locus Technologies
299 Fairchild Drive
Mountain View CA, 94043

Report ID: 8052109
Project ID: 27011-07-4100

Date Received: 05/21/08 09:00
Date Reported: 06/16/08 13:58

Volatile Organic Compounds by EPA Method 524.2 - Quality Control

Batch W8E0889 - EPA 524.2

LCS Dup (W8E0889-BSD1) Analyzed: 05/22/08

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Data Qualifiers
Di-isopropyl ether	6.84	3.0	ug/l	6.00		114	70-130	0.3	30	
Ethyl tert-butyl ether	6.66	3.0	ug/l	6.00		111	70-130	3	30	
Ethylbenzene	6.50	0.50	ug/l	6.00		108	70-130	2	30	
Freon 113	7.21	5.0	ug/l	6.00		120	70-130	1	30	
Hexachlorobutadiene	5.70	0.50	ug/l	6.00		95	70-130	7	30	
Isopropylbenzene	6.33	0.50	ug/l	6.00		106	70-130	2	30	
m,p-Xylene	12.9	1.0	ug/l	12.0		107	70-130	2	30	
m-Dichlorobenzene	5.81	0.50	ug/l	6.00		97	70-130	3	30	
Methyl tert-butyl ether (MTBE)	6.29	3.0	ug/l	6.00		105	70-130	2	30	
Methylene chloride	5.99	0.50	ug/l	6.00		100	70-130	0.3	30	
Naphthalene	7.01	0.50	ug/l	6.00		117	70-130	2	30	
n-Butylbenzene	6.29	0.50	ug/l	6.00		105	70-130	6	30	
n-Propylbenzene	6.26	0.50	ug/l	6.00		104	70-130	4	30	
o-Dichlorobenzene	5.85	0.50	ug/l	6.00		98	70-130	3	30	
o-Xylene	6.37	0.50	ug/l	6.00		106	70-130	1	30	
p-Dichlorobenzene	5.92	0.50	ug/l	6.00		99	70-130	2	30	
p-Isopropyltoluene	6.18	0.50	ug/l	6.00		103	70-130	4	30	
sec-Butylbenzene	6.23	0.50	ug/l	6.00		104	70-130	4	30	
Styrene	6.37	0.50	ug/l	6.00		106	70-130	2	30	
Tert-amyl methyl ether	6.42	3.0	ug/l	6.00		107	70-130	3	30	
tert-Butylbenzene	6.13	0.50	ug/l	6.00		102	70-130	3	30	
Tetrachloroethene	6.16	0.50	ug/l	6.00		103	70-130	0.8	30	
Toluene	6.53	0.50	ug/l	6.00		109	70-130	0.9	30	
trans-1,2-Dichloroethene	7.00	0.50	ug/l	6.00		117	70-130	0.3	30	
trans-1,3-Dichloropropene	6.63	0.50	ug/l	6.00		110	70-130	0.8	30	
Trichloroethene	6.16	0.50	ug/l	6.00		103	70-130	0.2	30	
Trichlorofluoromethane	6.26	5.0	ug/l	6.00		104	70-130	3	30	
Vinyl chloride	7.62	0.50	ug/l	6.00		127	70-130	1	30	

Locus Technologies 299 Fairchild Drive Mountain View CA, 94043	Report ID: 8052109 Project ID: 27011-07-4100	Date Received: 05/21/08 09:00 Date Reported: 06/16/08 13:58

Notes and Definitions

Q-08	High bias in the QC sample does not affect sample result since analyte was not detected
O-09	This sample was received with the EPA recommended holding time expired
O-04	This analysis was performed outside the EPA recommended holding time.
B-06	This analyte was found in the method blank, which was possibly contaminated during sample preparation The batch was accepted since this analyte was either not detected or more than 10 times of the blank value for all the samples in the batch
ND	NOT DETECTED at or above the Reporting Limit If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL)
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
% Rec	Percent Recovery
Sub	Subcontracted analysis, original report available upon request
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

Any remaining sample(s) will be disposed of one month from the final report date unless other arrangements are made in advance.

An Absence of Total Coliform meets the drinking water standards as established by the California Department of Health Services

The Reporting Limit (RL) is referenced as the Laboratory's Practical Quantitation Limit (PQL) or the Detection Limit for Reporting Purposes (DLR).

All samples collected by Weck Laboratories have been sampled in accordance to laboratory SOP Number MIS002

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 12718

PROJECT NAME Recycled water
PROJECT NUMBER 27011-07-~~3200~~ 4100
RECORDER C. Newman (SIGN)
SAMPLERS Castro / Murphy (PRINT)
(SIGN)
8052109

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
B. Glass Liter
[✓ C.] Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F.] Other ______

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
[✓ I.] Other treated waste

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Weck Laboratories

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	NUMBER OF CONTAINERS AND PRESERVATION: NaOH ~~HNO_3~~	NUMBER OF CONTAINERS AND PRESERVATION: HCL	NUMBER OF CONTAINERS AND PRESERVATION: NH_4Cl	Field Filtered (check)	ANALYSIS REQUESTED: DOC-SM5310C	ANALYSIS REQUESTED: EPA 524.2	ANALYSIS REQUESTED: EPA 552.2	ANALYSIS REQUESTED: EPA 314.0	ANALYSIS REQUESTED: SM4500CN-E					TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	5/19	845	MW-1	19.3	1016	6.24		A	2	1	2	1		X	X	X	X	X					1						
2	↓	950	MW-2	19.8	631	6.51		A	2	1	2	1		↓	↓	↓	↓	↓					1						
3	↓	1050	MW-3	20.0	974	6.65		A	2	1	2	1		↓	↓	↓	↓	↓					1						
4	↓	1200	MW-4 *	21.8	996	6.30		A	2	1	2	1		↓	↓	↓	↓	↓					1						
5	↓	0700	SJ/SC plant					I	2	1	2	1		↓	↓	↓	↓	↓					1						
6	↓	0735	4761	—	—	—		I	2	1	2	1		↓	↓	↓	↓	↓					1						
7	↓	N/A	4762	—	—	—		H	2	1	2	1		↓	↓	↓	↓	↓					1						
8																													
9																													
10																													
11																													
12																													
13																													
14																													3.8°C
15																													
16																													

NOTES / MISCELLANEOUS
* see bottle label for preservative info
* container for TOC was received broken for ID # MW-4.
JG 5/21/08.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
	Jaime Gimer	5/21/08	9:00

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
commercial courier	cooler	12717	T. Murphy	5/20/08	1600			

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1333 N. CALIFORNIA BLVD., STE. 540 • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ LOS ANGELES • 880 APOLLO ST., STE. 353 • EL SEGUNDO, CA 90245 • (310) 535-4600 • FAX (310) 535-4602
☐ OTHER ______ TEL ______ FAX ______

WHITE: Field Copy YELLOW: Project Copy PINK: Laboratory Copy

1 of 2

REV. 2/99

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 12717

PROJECT NAME Recycled Water
PROJECT NUMBER 27011-07-~~3200~~ 4100
RECORDER C. Newman (SIGN)
SAMPLERS Castro/Murphy (PRINT)
H. Castro / T. Murphy (SIGN)
8052109

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H. Blank/Spike]
[✓ I. Other treated water]

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Weck Laboratories

LABORATORY USE ONLY
LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H_3PO_4	Field Filtered (check)	SM2320B	EPA 200.7	EPA 300.0	TOC-SM5310C	TDS-SM2540C	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	5/19	845	MW-1	19.3	1016	6.24		A	3	1		1		X	X	X	X	X	1						
2	↓	950	MW-2	19.8	631	6.51		A	3	1		1		↓	↓	↓	↓	↓	1						
3		1050	MW-3	20.0	974	6.65		A	3	1		1							1						
4		1200	MW-4	21.8	996	6.30		A	3	1		1							1						
5		0700	SJ/SC treat	23.2	1236	7.40		I	3	1		1							1						
6		0735	4761	—	—	—		I	3	1		1							1						
7		N/K	4762	—	—	—		H	3	1		1							1						
8																									
9																									
10																									
11																									
12																									
13																									
14																									
15																									3.8°
16																									

NOTES / MISCELLANEOUS
* see bottle label for preservative info

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
	Janne Gimer	5/21/08	9:00

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
commercial courier	cooler	12718	T. Murphy	5/20/08	1600			

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ LOS ANGELES • 880 APOLLO ST., STE. 353 • EL SEGUNDO, CA 90245 • (310) 535-4600 • FAX (310) 535-4602
☐ OTHER ______ TEL ______ FAX ______

REV. 2/99

WHITE: Field Copy YELLOW: Project Copy PINK: Laboratory Copy

2 of 2

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-3200; Recycled Water
EML ID: 423730

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 05-22-2008
MPN-Standard Bacteria: 05-27-2008

Project SOPs: MPN-Standard Bacteria (100130)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-3200; Recycled Water

Date of Sampling: 05-19-2008
Date of Receipt: 05-19-2008
Date of Report: 05-27-2008

MPN REPORT

Location: 1, MW-1
Lab ID-Version‡: 1862215-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	11	4	30
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

Location: 2, MW-2
Lab ID-Version‡: 1862217-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	2	0.01	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

Location: 3, MW-3
Lab ID-Version‡: 1862219-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	< 2	-	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-3200; Recycled Water

Date of Sampling: 05-19-2008
Date of Receipt: 05-19-2008
Date of Report: 05-27-2008

MPN REPORT

Location: 4, MW-4 Lab ID-Version‡: 1862221-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	< 2	-	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

Location: 5, SJ/SC treat Lab ID-Version‡: 1862223-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	< 2	-	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

Location: 6, 4761 Lab ID-Version‡: 1862225-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	< 2	-	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-3200; Recycled Water

Date of Sampling: 05-19-2008
Date of Receipt: 05-19-2008
Date of Report: 05-27-2008

MPN REPORT

Location: 7, 4762

Lab ID-Version‡: 1862227-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	05/19/08 15:00	< 2	-	14
Total Coliform	SM 9221 B	05/19/08 15:00	< 2	-	14
E. coli	SM 9221 F	05/19/08 15:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

RECEIVED
OCT 31 2008
BY:

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Oct 01 2008
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA

Report#: 241730R
Project: RECLAIMED
PO#: 27011-07-320

Report#241730R replaces the original Report.

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 19 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241730
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Matrix	Sample Date	Tests Scheduled
2805210408	4761	Water	19-may-2008 07:35:00	@525PLUS @NDMA @PFC EDTASUB NTASUB

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

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Tel: 626 386 1100
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CHAIN OF CUSTODY RECORD

241730

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLES CHECKED AGAINST COC BY: OS

SAMPLES LOGGED IN BY: OS

SAMPLE TEMP WHEN REC'D AT LAB: 3° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☒ (check for yes)
REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA....)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: Tom Murphy T. Murphy

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX*	GRAB	COMP	NDMA-EPA1625	Perfluorochemicals MWH LC/MS/MS	~~[illegible]~~	NTA and EDTA EPA 360(mod)	Terbuthylazine EPA 525plus	SAMPLER COMMENTS
5/19	0735		4761	FW	X		X	X	~~X~~	X	X	

SCANNED

D10010172539666

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	T. Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:	O. Sanchez	O. SANCHEZ	MWH	5/21/08	[illegible]
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #

Date Sampled

Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# 46884

Sampler: please return this paper with your samples

Created by MAG

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	**Comments**
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

SCANNED

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

MWH Laboratories
A Division of MWH Americas, Inc.

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Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#241730

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 17:28:09

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210408	**4761**				
05/29/08	N-Nitroso dimethylamine (NDMA)		116		ng/l	2.0
05/25/08	Perfluoro octanoic acid - PFOA		29		ng/l	20

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data Report #241730

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

4761 (2805210408) Sampled on 05/19/08 07:35

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/28/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	2,4-Dinitrotoluene	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	2,6-Dinitrotoluene	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Alpha-BHC	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	alpha-Chlordane	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Diazinon (Qualitative)	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Acenaphthene	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Acenaphthylene	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Acetochlor	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Alachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Aldrin	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Anthracene	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Atrazine	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Benz(a)Anthracene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Benzo(a)pyrene	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Benzo(b)Fluoranthene	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Benzo(g,h,i)Perylene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Benzo(k)Fluoranthene	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND(Q5)	ug/l	0.6	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Beta-BHC	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Butylbenzylphthalate	ND(Q5)	ug/l	0.5	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Bromacil	ND(Q5)	ug/l	0.2	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Butachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Caffeine by method 525mod	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Chrysene	ND(Q5)	ug/l	0.02	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Chlorobenzilate	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Chloroneb	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Delta-BHC	ND(Q5)	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Dibenz(a,h)Anthracene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	4,4'-DDD	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	4,4'-DDE	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	4,4'-DDT	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Dichlorvos (DDVP)	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND(Q5)	ug/l	0.6	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Diethylphthalate	ND(Q5)	ug/l	0.5	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Dieldrin	ND(Q5)	ug/l	0.2	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Dimethylphthalate	ND(Q5)	ug/l	0.5	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Dimethoate	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Di-n-Butylphthalate	ND(Q5)	ug/l	1.0	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Di-N-octylphthalate	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Chlorpyrifos (Dursban)	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Endrin Aldehyde	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Endrin	ND(Q5)	ug/l	0.2	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	EPTC	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Endosulfan I (Alpha)	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Endosulfan II (Beta)	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Endosulfan Sulfate	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Fluoranthene	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Fluorene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	gamma-Chlordane	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Hexachlorobenzene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Hexachlorocyclopentadiene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Heptachlor	ND(Q5)	ug/l	0.03	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Isophorone	ND(Q5)	ug/l	0.5	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Lindane	ND(Q5)	ug/l	0.04	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Methoxychlor	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Metribuzin	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Malathion	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Molinate	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Metolachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Naphthalene	ND(BAQ5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	trans-Nonachlor	ND(Q5)	ug/l	0.05	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Pentachlorophenol	ND(Q5)	ug/l	1.0	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Pendimethalin	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Permethrin (mixed isomers)	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Phenanthrene	ND(Q5)	ug/l	0.04	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Propachlor	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Parathion	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Pyrene	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Simazine	ND(Q5)	ug/l	0.05	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Terbuthylazine	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Thiobencarb	ND(Q5)	ug/l	0.2	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Terbacil	ND(Q5)	ug/l	0.1	1
05/30/08	06/09/08 10:46	433479	(EPA 525.2)	Trifluralin	ND(Q5)	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	101(Q5)	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	123(Q5)	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	78(Q5)	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/29/08 00:00	429644	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	116	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	62	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:40	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:41	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	29	ng/l	20	1
	05/25/08 11:40	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	101	% Rec		
			(MWH PFC)	PFBA-C13	89	% Rec		
			(MWH PFC)	PFOS-C13	94	% Rec		

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Report
Comments
#241730

Group Comments

Report revised to include BA flag for naphthalene blank contamination in EPA Method 525.2 results.
Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210408)

Test: 525 Semivolatiles by GC/MS (EPA 525.2)

Q5 - Sample received with inadequate chemical preservation, but preserved by the laboratory.

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte, but analyte not present in the sample.

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Laboratory
QC Summary
#241730

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/29/2008

2805210408	4761	Analyzed by: dlo

QC Ref #433479 - 525 Semivolatiles by GC/MS Analysis Date: 06/09/2008

2805210408	4761	Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210408	4761	Analyzed by: ali
2805210408	4761	Analyzed by: ali

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Laboratory QC Report #241730

Locus Technologies

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #433479 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.02	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

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Locus Technologies
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LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

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LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
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LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

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LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL		
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Metrohm-Peak, LLC

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	Sample	EDTA mg/L	NTA mg/L
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
May 28 2008
MWH LABORATORIES

DATE OF ISSUE
JUN 10 2008
MWH LABORATORIES

ACCREDITED IN ACCORDANCE WITH nelac
01114CA

MAG Matthew Allen Glover
Project Manager

Report#: 241455
Project: RECLAIMED
PO#: 27011-07

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are QC Report,QC Summary,Data Report,Hits Report, totaling 4 page[s].

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

241455

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLES CHECKED AGAINST COC BY: JR

SAMPLES LOGGED IN BY: JR

SAMPLE TEMP WHEN REC'D AT LAB: 7° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ (check for yes)

NON-COMPLIANCE SAMPLES ☑ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB#: 27011-07 ~~3200~~ 4100

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: MURPHY/CASTRO

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	Total Phosphate EPA 365.1/D23															SAMPLER COMMENTS
5/19	0845		MW-1	RGW	✓																	
	0950		MW-2	RGW	✓																	
	1050		MW-3	RGW	✓																	
	1200		MW-4	RGW	✓																	
	0700		SJ/SC treat	FW	✓																	
	0735		4761	FW	✓																	
	N/A		4762	FW	✓																	

*** MATRIX TYPES:**

RSW = Raw Surface Water	**CFW** = Chlor(am)inated Finished Water	**CWW** = Chlorinated Waste Water	**BW** = Bottled Water	**SO** = Soil
RGW = Raw Ground Water	**FW** = Other Finished Water	**WW** = Other Waste Water	**SW** = Storm Water	**SL** = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/19/08	1500
RECEIVED BY:		DESANCHEZ	MWL	5-20-08	[illegible]
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE _____ OF _____

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-4100
Group#: 241455
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/20/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2805200240	MW-1	OPO4	Water	19-may-2008 08:45:00
2805200241	MW-2	OPO4	Water	19-may-2008 09:50:00
2805200242	MW-3	OPO4	Water	19-may-2008 10:50:00
2805200243	MW-4	OPO4	Water	19-may-2008 12:00:00
2805200244	5J/SC TREAT	OPO4	Water	19-may-2008 07:00:00
2805200245	4761	OPO4	Water	19-may-2008 07:35:00
2805200246	4762	OPO4	Water	19-may-2008 00:00:00

Test Acronym Description

Test Acronym	Description
OPO4	Orthophosphate as P

MWH Laboratories
A Division of MWH Americas, Inc

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#241455

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
20-may-2008 14:00:21

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805200240	**MW-1**				
05/20/08	Orthophosphate as P		0.145		mg/l	0.010
	2805200241	**MW-2**				
05/20/08	Orthophosphate as P		0.121		mg/l	0.010
	2805200242	**MW-3**				
05/20/08	Orthophosphate as P		0.151		mg/l	0.010
	2805200243	**MW-4**				
05/20/08	Orthophosphate as P		0.148		mg/l	0.010
	2805200244	**5J/SC TREAT**				
05/20/08	Orthophosphate as P		0.168		mg/l	0.010
	2805200245	**4761**				
05/20/08	Orthophosphate as P		0.175		mg/l	0.010
	2805200246	**4762**				
05/20/08	Orthophosphate as P		0.076		mg/l	0.010

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel. 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Data Report
#241455

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/20/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
MW-1 (2805200240) Sampled on 05/19/08 08:45								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.145	mg/l	0.010	1
MW-2 (2805200241) Sampled on 05/19/08 09:50								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.121	mg/l	0.010	1
MW-3 (2805200242) Sampled on 05/19/08 10:50								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.151	mg/l	0.010	1
MW-4 (2805200243) Sampled on 05/19/08 12:00								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.148	mg/l	0.010	1
5J/SC TREAT (2805200244) Sampled on 05/19/08 07:00								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.168	mg/l	0.010	1
4761 (2805200245) Sampled on 05/19/08 07:35								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.175	mg/l	0.010	1
4762 (2805200246) Sampled on 05/19/08 00:00								
	05/20/08 16:20	427878	(4500PE/HACH)	Orthophosphate as P	0.076	mg/l	0.010	1

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Summary
#241455

Locus Technologies

QC Ref #427878 - Orthophosphate as P **Analysis Date: 05/20/2008**

2805200240	MW-1	Analyzed by: anh
2805200241	MW-2	Analyzed by: anh
2805200242	MW-3	Analyzed by: anh
2805200243	MW-4	Analyzed by: anh
2805200244	5J/SC TREAT	Analyzed by: anh
2805200245	4761	Analyzed by: anh
2805200246	4762	Analyzed by: anh

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A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Report
#241455

Locus Technologies

QC Ref #427878 Orthophosphate as P

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05210079	MGL		(0-0)	
LCS1	Orthophosphate as P	0.5	0.501	MGL	100.2	(90-110)	
LCS2	Orthophosphate as P	0.5	0.505	MGL	101.0	(90-110)	
MBLK	Orthophosphate as P	ND	<0.010	MGL			
MRL_CHK	Orthophosphate as P	0.010	0.011	MGL	110.0	(50-150)	
MS	Orthophosphate as P	0.5	0.450	MGL	90.0	(80-120)	
MSD	Orthophosphate as P	0.5	0.453	MGL	90.6	(80-120)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only. batch control is based on LCS. Criteria for duplicates are advisory only. unless otherwise specified in the method.

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Jun 25 2008
MWH LABORATORIES

DATE OF ISSUE
JUL 03 2008
MWH LABORATORIES

for MAG

MAG Matthew Allen Glover
Project Manager

Report#: 241727
Project: RECLAIMED
PO#: 27011-07-320

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 19 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241727
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2805210393	MW-4	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	19-may-2008 12:00:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

241727

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLE TEMP WHEN REC'D AT LAB: 2° (Compliance: 4 +/- 2°C)

CONDITION OF BLUE ICE: FROZEN ✓ **PARTIALLY FROZEN** ___ **THAWED** ___

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: [illegible]

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled water)

SYSTEM #:

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES (check for yes) ☐
- Requires state forms ☐

NON-COMPLIANCE SAMPLES (check for yes) ☒

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	~~[illegible]~~	NTA and EDTA EPA 300 (mod)	Terbuthylazine EPA 525 plus	SAMPLER COMMENTS
5/19	1200		MW-4	RGW	X		X	X	X	X	X	

SCANNED

D10010172539450

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Tom Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:	Joe Sanchez	JOE SANCHEZ	MWH	5-21-08	9:00
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ___ OF ___

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #

Date Sampled

Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# **46884**

Sampler: please return this paper with your samples

Created by **MAG**

Order Date
05/08/08
Date Needed
by Client
05/09/08
Date Samples
to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

SCANNED
SCANNED

Code Status ate Shipped Via Tracking # # of Coolers Prepared By Allen Glover

Laboratory
Hits Report
#241727

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 17:21:59

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210393	MW-4				

SUMMARY OF POSITIVE DATA ONLY.

Laboratory
Data Report
#241727

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

MW-4 (2805210393) **Sampled on 05/19/08 12:00**

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/28/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300	) NTA by Ion Chrom- Subcontract	ND	ug/l	100	1

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) 2,4-Dinitrotoluene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) 2,6-Dinitrotoluene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Alpha-BHC	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) alpha-Chlordane	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Diazinon (Qualitative)	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Acenaphthene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Acenaphthylene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Acetochlor	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Alachlor	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Aldrin	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Anthracene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Atrazine	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Benz(a)Anthracene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Benzo(a)pyrene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Benzo(b)Fluoranthene	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Benzo(g,h,i)Perylene	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Benzo(k)Fluoranthene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Di(2-Ethylhexyl)phthalate	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Beta-BHC	ND	ug/l	0.6	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Butylbenzylphthalate	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Bromacil	ND	ug/l	0.5	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Butachlor	ND	ug/l	0.2	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Caffeine by method 525mod	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Chrysene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Chlorobenzilate	ND	ug/l	0.02	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Chloroneb	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Delta-BHC	ND	ug/l	0.1	1
					ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) 4,4'-DDD	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) 4,4'-DDE	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) 4,4'-DDT	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Dichlorvos (DDVP)	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Diethylphthalate	ND	ug/l	0.5	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Dieldrin	ND	ug/l	0.2	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Dimethylphthalate	ND	ug/l	0.5	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Dimethoate	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Di-n-Butylphthalate	ND	ug/l	1.0	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Di-N-octylphthalate	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Endrin Aldehyde	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Endrin	ND	ug/l	0.2	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) EPTC	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Endosulfan I (Alpha)	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Endosulfan II (Beta)	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Endosulfan Sulfate	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Fluoranthene	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Fluorene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) gamma-Chlordane	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Hexachlorobenzene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Hexachlorocyclopentadiene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Heptachlor	ND	ug/l	0.03	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Isophorone	ND	ug/l	0.5	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Lindane	ND	ug/l	0.04	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Methoxychlor	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Metribuzin	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Malathion	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Molinate	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Metolachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Naphthalene	ND(BA)	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) trans-Nonachlor	ND	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Pentachlorophenol	ND	ug/l	1.0	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Pendimethalin	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Permethrin (mixed isomers)	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Phenanthrene	ND	ug/l	0.04	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Propachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Parathion	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Pyrene	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Simazine	ND	ug/l	0.05	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Terbuthylazine	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Thiobencarb	ND	ug/l	0.2	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Terbacil	ND	ug/l	0.1	1
05/30/08	06/06/08 16:22	431678	(EPA 525.2	) Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2	) Perylene-d12(70-130)	71	% Rec		
			(EPA 525.2	) 1.3-dimethyl-2-nbenz(70-130)	97	% Rec		
			(EPA 525.2	) Triphenylphosphate(70-130)	106	% Rec		
			N-Nitroso dimethylamine (NDMA)					
05/22/08	05/29/08 00:00	429644	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	92	% Rec		
			Perfluorinated compounds					
	05/25/08 11:38	434128	(MWH PFC	) Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:38	434128	(MWH PFC	) Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:38	434128	(MWH PFC	) Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC	) PFOS-C13	105	% Rec		
			(MWH PFC	) PFOA-C13	110	% Rec		
			(MWH PFC	) PFBA-C13	95	% Rec		

Group Comments

Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210393)

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte not present in the sample.

Laboratory
QC Summary
#241727

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/29/2008

2805210393 MW-4 Analyzed by: dlo

QC Ref #431678 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210393 MW-4 Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210393 MW-4 Analyzed by: ali

Laboratory
QC Report
#241727

Locus Technologies

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431678 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

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Locus Technologies
(continued)

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.02	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

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LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

Locus Technologies
(continued)

LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

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Locus Technologies
(continued)

LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

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LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

Locus Technologies
(continued)

LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL		
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

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Locus Technologies
(continued)

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

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MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<50	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<20	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<50	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	**Sample**	**EDTA mg/L**	**NTA mg/L**
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:____________________________________

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Feb 04 2009
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

REVISED
S7 wte added 2/4/09

01114CA
Report#: 241718
Project: RECLAIMED
PO#: 27011-07-320

This report shall not be reproduced except in full, without the written approval of the laboratory.
Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 20 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241718
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Matrix	Sample Date	Tests Scheduled
2805210360	MW-2	Water	19-may-2008 09:50:00	@525PLUS @NDMA @PFC EDTASUB NTASUB

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

LOGGED
REVIEWED
STORED

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

241718

MWH LABS USE ONLY:

LOGIN COMMENTS: ____

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: JS

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES (check for yes) ☐
- Requires state forms ☐

NON-COMPLIANCE SAMPLES (check for yes) ☒

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only
STD ✓ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	~~[illegible]~~	NTA and EDTA EPA 300 (mod)	Terbuthylazine EPA 525 plus											SAMPLER COMMENTS
5/19	0950		MW-2	RGW	X		X	X	X	X	X											

D10010172539286

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:		JOE SANCHEZ	MWH	5-21-08	[illegible]
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ____

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #
Date Sampled
Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# 46884

Sampler: please return this paper with your samples

Created by MAG

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

MWH Laboratories
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1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#241718

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 17:05:38

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210360	MW-2				

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Data Report
#241718

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
MW-2 (2805210360)			**Sampled on**	**05/19/08 09:50**				
	05/28/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300	) NTA by Ion Chrom- Subcontract	ND	ug/l	100	1
			525 Semivolatiles by GC/MS					
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) 2,4-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) 2,6-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Alpha-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) alpha-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Diazinon (Qualitative)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Acenaphthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Acenaphthylene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Acetochlor	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Alachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Aldrin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Anthracene	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Atrazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Benz(a)Anthracene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Benzo(a)pyrene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Benzo(b)Fluoranthene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Benzo(g,h,i)Perylene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Benzo(k)Fluoranthene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Di(2-Ethylhexyl)phthalate	ND(E6S7)	ug/l	0.6	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Beta-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Butylbenzylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Bromacil	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Butachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Caffeine by method 525mod	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Chlorothalonil(Draconil,Bravo)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Chrysene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Chlorobenzilate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Chloroneb	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2	) Delta-BHC	ND(E6)	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Dibenz(a,h)Anthracene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	4,4'-DDD	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	4,4'-DDE	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	4,4'-DDT	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Dichlorvos (DDVP)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND(E6)	ug/l	0.6	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Diethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Dieldrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Dimethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Dimethoate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Di-n-Butylphthalate	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Di-N-octylphthalate	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Chlorpyrifos (Dursban)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Endrin Aldehyde	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Endrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	EPTC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Endosulfan I (Alpha)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Endosulfan II (Beta)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Endosulfan Sulfate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Fluoranthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Fluorene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	gamma-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Hexachlorobenzene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Hexachlorocyclopentadiene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Heptachlor	ND(E6)	ug/l	0.03	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Isophorone	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Lindane	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Methoxychlor	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Metribuzin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Malathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Molinate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Metolachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Naphthalene	ND(E6BA)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	trans-Nonachlor	ND(E6)	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Pentachlorophenol	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Pendimethalin	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Permethrin (mixed isomers)	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Phenanthrene	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Propachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Parathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Pyrene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Simazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Terbuthylazine	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Thiobencarb	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Terbacil	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:58	431667	(EPA 525.2)	Trifluralin	ND(E6)	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	103(E6)	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	60(E6)	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	98(E6)	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/29/08 00:00	429644	(ML/EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(ML/EPA 521)	NDMA-D6(50-150)-Int Std	105	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:38	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:38	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:38	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	102	% Rec		
			(MWH PFC)	PFOS-C13	89	% Rec		
			(MWH PFC)	PFBA-C13	99	% Rec		

Group Comments

Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210360)

Test: 525 Semivolatiles by GC/MS (EPA 525.2)

Perylene-d12(70-130) out of limit
Result out of limits: @525PLUS SURR5251 in sample 2805210360
E6 - Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Test: Benzo(a)pyrene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(b)Fluoranthene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(g,h,i)Perylene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(k)Fluoranthene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di(2-Ethylhexyl)phthalate (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Chrysene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Dibenz(a,h)Anthracene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di-N-octylphthalate (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Indeno(1,2,3,c,d)Pyrene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Methoxychlor (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte not present in the sample.

Test: Permethrin (mixed isomers) (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Summary
#241718

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/29/2008

2805210360 MW-2 Analyzed by: dlo

QC Ref #431667 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210360 MW-2 Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210360 MW-2 Analyzed by: ali

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Laboratory QC Report #241718

Locus Technologies

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431667 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

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MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

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MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

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MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

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LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

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LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

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LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

Locus Technologies
(continued)

LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL		
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

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LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Thiobencarb	ND	<0.2	UGL			
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)	
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)	
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)	
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)	
MBLK	Terbacil	ND	<0.1	UGL			
MS	Terbacil	2	2.09	UGL	104.5	(70-130)	
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)	
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)	
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)	
MBLK	Trifluralin	ND	<0.1	UGL			
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)	
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)	

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	Sample	EDTA mg/L	NTA mg/L
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:________________________________

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

RECEIVED
FEB 25 2009
BY:

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Feb 04 2009
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA
Report#: 241728
Project: RECLAIMED
PO#: 27011-07-320

This report shall not be reproduced except in full, without the written approval of the laboratory.
Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 20 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241728
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Matrix	Sample Date
Tests Scheduled			
2805210405	MW-3	Water	19-may-2008 10:50:00
@525PLUS @NDMA @PFC EDTASUB NTASUB			

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

LOGGED
REVIEWED
STORED

241728

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS: ____________

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: JS

SAMPLE TEMP WHEN REC'D AT LAB: 2° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ (check for yes)

NON-COMPLIANCE SAMPLES ☑ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA....)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), *OR*

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	~~[illegible]~~	NTA and EDTA - EPA 300(mod)	Terbuthylazine - EPA 525 plus										SAMPLER COMMENTS
5/19	1050		MW-3	RGW	X		X	X	~~X~~	X	X										

PPING ONLY

Page 1 of 1

D10010172539418

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:	Joe Sanchez	JOE SANCHEZ	MWH	5-21-08	900
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #

Date Sampled

Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# 46884

Sampler: please return this paper with your samples

Created by MAG

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#241728

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 17:24:50

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210405	MW-3				

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
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1 800 566 LABS (1 800 566 5227)

Laboratory
Data Report
#241728

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
MW-3 (2805210405)			**Sampled on 05/19/08 10:50**					
	05/28/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1
			525 Semivolatiles by GC/MS					
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	2,4-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	2,6-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Alpha-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	alpha-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Diazinon (Qualitative)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Acenaphthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Acenaphthylene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Acetochlor	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Alachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Aldrin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Anthracene	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Atrazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Benz(a)Anthracene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Benzo(a)pyrene	ND(S7E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Benzo(b)Fluoranthene	ND(S7E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Benzo(g,h,i)Perylene	ND(S7E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Benzo(k)Fluoranthene	ND(S7E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND(S7E6)	ug/l	0.6	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Beta-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Butylbenzylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Bromacil	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Butachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Caffeine by method 525mod	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Chrysene	ND(S7E6)	ug/l	0.02	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Chlorobenzilate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Chloroneb	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Delta-BHC	ND(E6)	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Dibenz(a,h)Anthracene	ND(S7E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	4,4'-DDD	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	4,4'-DDE	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	4,4'-DDT	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Dichlorvos (DDVP)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND(E6)	ug/l	0.6	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Diethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Dieldrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Dimethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Dimethoate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Di-n-Butylphthalate	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Di-N-octylphthalate	ND(S7E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Chlorpyrifos (Dursban)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Endrin Aldehyde	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Endrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	EPTC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Endosulfan I (Alpha)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Endosulfan II (Beta)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Endosulfan Sulfate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Fluoranthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Fluorene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	gamma-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Hexachlorobenzene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Hexachlorocyclopentadiene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Heptachlor	ND(E6)	ug/l	0.03	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND(S7E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Isophorone	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Lindane	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Methoxychlor	ND(S7E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Metribuzin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Malathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Molinate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Metolachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Naphthalene	ND(BAE6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	trans-Nonachlor	ND(E6)	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Pentachlorophenol	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Pendimethalin	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Permethrin (mixed isomers)	ND(S7E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Phenanthrene	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Propachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Parathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Pyrene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Simazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Terbuthylazine	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Thiobencarb	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Terbacil	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 16:46	431667	(EPA 525.2)	Trifluralin	ND(E6)	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	104(E6)	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	61(E6)	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	96(E6)	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/29/08 00:00	429644	(ML/EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(ML/EPA 521)	NDMA-D6(50-150)-Int Std	109	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:40	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:40	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:40	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFBA-C13	105	% Rec		
			(MWH PFC)	PFOA-C13	93	% Rec		
			(MWH PFC)	PFOS-C13	99	% Rec		

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Report
Comments
#241728

Group Comments

Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210405)

Test: 525 Semivolatiles by GC/MS (EPA 525.2)

Perylene-d12(70-130) out of limit
Result out of limits: @525PLUS SURR5251 in sample 2805210405
E6 - Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Test: Benzo(a)pyrene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(b)Fluoranthene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(g,h,i)Perylene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(k)Fluoranthene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di(2-Ethylhexyl)phthalate (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Chrysene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Dibenz(a,h)Anthracene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di-N-octylphthalate (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Indeno(1,2,3,c,d)Pyrene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Methoxychlor (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte, but analyte not present in the sample.

Test: Permethrin (mixed isomers) (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

MWH Laboratories
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Laboratory
QC Summary
#241728

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/29/2008

2805210405	MW-3	Analyzed by: dlo

QC Ref #431667 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210405	MW-3	Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210405	MW-3	Analyzed by: ali

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Laboratory
QC Report
#241728

Locus Technologies

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431667 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

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Locus Technologies
(continued)

LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

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LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

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Locus Technologies
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LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

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LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL	-	
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	Sample	EDTA mg/L	NTA mg/L
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:____________________________________

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Feb 04 2009
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

REVISED
S7 note added 2/4/09

01114CA

Report#: 241714
Project: RECLAIMED
PO#: 27011-07-320

This report shall not be reproduced except in full, without the written approval of the laboratory.
Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 20 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-3200
Group#: 241714
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2805210357	MW-1	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	19-may-2008 08:45:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

LOGGED
REVIEWED
STORED

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

24M14

MWH LABS USE ONLY:

LOGIN COMMENTS: ____

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: JS

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ **PARTIALLY FROZEN** ___ **THAWED** ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ ☐ (check for yes)

NON-COMPLIANCE SAMPLES ☒ (check for yes)

REGULATION INVOLVED: (eg SDWA, Phase V, NPDES, FDA....)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA - EPA 1625	Perfluorochemicals MWH LC/MS/MS	[illegible]	NTA and EDTA EPA 300 (mod)	Terbuthylazine EPA 526 plus										SAMPLER COMMENTS
5/19	0845		MW-1	RGW	X		X	X	X	X	X										

D10010172539559

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:		JOE SANCHEZ	MWH	5-21-08	9:20
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ____

PAGE ___ OF ___

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #	
Date Sampled	
Date Received	

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# 46884

Sampler: please return this paper with your samples

Created by MAG

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Ship Sample Kits to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address
Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HC!	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data Report #241714

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
MW-1 (2805210357)			**Sampled on 05/19/08 08:45**					
	05/28/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1
			525 Semivolatiles by GC/MS					
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	2,4-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	2,6-Dinitrotoluene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Alpha-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	alpha-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Diazinon (Qualitative)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Acenaphthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Acenaphthylene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Acetochlor	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Alachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Aldrin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Anthracene	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Atrazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Benz(a)Anthracene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Benzo(a)pyrene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Benzo(b)Fluoranthene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Benzo(g,h,i)Perylene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Benzo(k)Fluoranthene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	0.9(E6S7)	ug/l	0.6	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Beta-BHC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Butylbenzylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Bromacil	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Butachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Caffeine by method 525mod	ND(E6)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Chrysene	ND(E6S7)	ug/l	0.02	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Chlorobenzilate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Chloroneb	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Delta-BHC	ND(E6)	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Dibenz(a,h)Anthracene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	4,4'-DDD	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	4,4'-DDE	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	4,4'-DDT	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Dichlorvos (DDVP)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND(E6)	ug/l	0.6	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Diethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Dieldrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Dimethylphthalate	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Dimethoate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Di-n-Butylphthalate	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Di-N-octylphthalate	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Chlorpyrifos (Dursban)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Endrin Aldehyde	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Endrin	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	EPTC	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Endosulfan I (Alpha)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Endosulfan II (Beta)	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Endosulfan Sulfate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Fluoranthene	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Fluorene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	gamma-Chlordane	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Hexachlorobenzene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Hexachlorocyclopentadiene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Heptachlor	ND(E6)	ug/l	0.03	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND(E6S7)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Isophorone	ND(E6)	ug/l	0.5	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Lindane	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Methoxychlor	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Metribuzin	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Malathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Molinate	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Metolachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Naphthalene	ND(E6BA)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	trans-Nonachlor	ND(E6)	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Pentachlorophenol	ND(E6)	ug/l	1.0	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Pendimethalin	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Permethrin (mixed isomers)	ND(E6S7)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Phenanthrene	ND(E6)	ug/l	0.04	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Propachlor	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Parathion	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Pyrene	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Simazine	ND(E6)	ug/l	0.05	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Terbuthylazine	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Thiobencarb	ND(E6)	ug/l	0.2	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Terbacil	ND(E6)	ug/l	0.1	1
05/30/08	06/06/08 15:34	431667	(EPA 525.2)	Trifluralin	ND(E6)	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	109(E6)	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	50(E6)	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	98(E6)	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/22/08	05/28/08 00:00	429644	(ML/EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(ML/EPA 521)	NDMA-D6(50-150)-Int Std	81	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	05/25/08 11:37	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:37	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:37	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOA-C13	101	% Rec		
			(MWH PFC)	PFBA-C13	104	% Rec		
			(MWH PFC)	PFOS-C13	89	% Rec		

Group Comments

Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210357)

Test: 525 Semivolatiles by GC/MS (EPA 525.2)

E6 - Concentration estimated. Internal standard recoveries did not meet method acceptance criteria.

Test: Benzo(a)pyrene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(b)Fluoranthene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(g,h,i)Perylene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Benzo(k)Fluoranthene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di(2-Ethylhexyl)phthalate (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Chrysene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Dibenz(a,h)Anthracene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Di-N-octylphthalate (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Indeno(1,2,3,c,d)Pyrene (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Methoxychlor (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte not present in the sample.

Test: Permethrin (mixed isomers) (ML/EPA 525.2)

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
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Tel: 626 386 1100
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1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#241714

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 16:54:11

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210357	MW-1				
06/06/08	Di(2-Ethylhexyl)phthalate		0.9	6	ug/l	0.6

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory
QC Summary
#241714

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/28/2008

2805210357 MW-1 Analyzed by: dlo

QC Ref #431667 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210357 MW-1 Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210357 MW-1 Analyzed by: ali

MWH Laboratories
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Laboratory
QC Report
#241714

Locus Technologies

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431667 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

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Locus Technologies
(continued)

LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

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LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

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LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL	_	
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	Sample	EDTA mg/L	NTA mg/L
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:_______________________________

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Jun 25 2008
MWH LABORATORIES

DATE OF ISSUE
JUL 0 3 2008
MWH LABORATORIES

MAG Matthew Allen Glover
Project Manager

Report#: 241713
Project: RECLAIMED
PO#: 27011-07-032

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 19 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-03200
Group#: 241713
Project#: RECLAIMED
Proj Mgr: Allen Glover
Phone: (916) 374-8030

The following samples were received from you on **05/21/08.** They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2805210356	4762	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	19-may-2008

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

241713

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: GS

SAMPLES LOGGED IN BY: JC

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ **PARTIALLY FROZEN** ___ **THAWED** ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies (Recycled Water)

SYSTEM #:

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☒ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE [✓ SPECIAL] CONFIRMATION

MWH LABS CLIENT CODE: 46884

P.O.# / PROJECT JOB #: 27011-07-3200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: TOM MURPHY

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA-EPA1625	Perfluorochemicals MWH LC/MS/MS	~~[illegible]~~	NTA and EDTA EPA 300 (mod)	Terbuthylazine EPA525 plus	SAMPLER COMMENTS
5/19	N/A		4762	FW	X		X	X	~~X~~	X	X	

SCANNED

D10010172539525

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	5/20/08	1600
RECEIVED BY:	Joe Sanchez	JOE SANCHEZ	MWH	5-21-08	9:—
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #
Date Sampled
Date Received

Allen Glover **Your MWL Project Manager**
(916) 374-8030 **Direct Phone/Voice Mail**

Client Code LOCUS
Project Code RECLAIMED
PO# / Job#

RECLAIMED **ProjectName**

BO# 46884

Created by MAG

Order Date
05/08/08
Date Needed by Client
05/09/08
Date Samples to Arrive at MWL

Sampler: please return this paper with your samples

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
22	@NDMA		2 1L amber glass +1ml thio (8%)		
22	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
22	OPO4, OPO4-PO4		1 125 ml poly / no preservative **SHORT HOLDING TIME!!!!!**		
22	@PFC		1 x 125 ml poly		
22	EDTASUB, NTASUB		1 x 125 ml amber glass, no preservative		

SCANNED

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

Laboratory
Hits Report
#241713

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
21-may-2008 16:50:56

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2805210356	4762				

SUMMARY OF POSITIVE DATA ONLY.

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
05/21/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
4762 (2805210356)			**Sampled on 05/19/08 00:00**					
	05/28/08 00:00		(EPA 300	) EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	05/28/08 00:00		(EPA 300	) NTA by Ion Chrom- Subcontract	ND	ug/l	100	1
			525 Semivolatiles by GC/MS					
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) 2,4-Dinitrotoluene	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) 2,6-Dinitrotoluene	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Alpha-BHC	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) alpha-Chlordane	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Diazinon (Qualitative)	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Acenaphthene	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Acenaphthylene	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Acetochlor	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Alachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Aldrin	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Anthracene	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Atrazine	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Benz(a)Anthracene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Benzo(a)pyrene	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Benzo(b)Fluoranthene	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Benzo(k)Fluoranthene	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Beta-BHC	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Butylbenzylphthalate	ND	ug/l	0.5	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Bromacil	ND	ug/l	0.2	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Butachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Caffeine by method 525mod	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Chrysene	ND	ug/l	0.02	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Chlorobenzilate	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Chloroneb	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2	) Delta-BHC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Naphthalene	ND(BA)	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Terbuthylazine	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Thiobencarb	ND	ug/l	0.2	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
05/30/08	06/06/08 15:10	431678	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Perylene-d12(70-130)	84	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	95	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	109	% Rec		
			N-Nitroso dimethylamine (NDMA)					
05/22/08	05/28/08 00:00	429644	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	104	% Rec		
			Perfluorinated compounds					
	05/25/08 11:35	434128	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	50	1
	05/25/08 11:35	434128	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	20	1
	05/25/08 11:35	434128	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	50	1
			(MWH PFC)	PFOS-C13	90	% Rec		
			(MWH PFC)	PFBA-C13	94	% Rec		
			(MWH PFC)	PFOA-C13	95	% Rec		

Group Comments

Analytical results for EDTA and NTA are submitted by Metrohm-Peak, Inc. Houston, TX

(QC Ref#: 2805210356)

Test: Naphthalene (ML/EPA 525.2)

BA - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL), but analyte not present in the sample.

Laboratory
QC Summary
#241713

Locus Technologies

QC Ref #429644 - N-Nitroso dimethylamine (NDMA) Analysis Date: 05/28/2008

2805210356 4762 Analyzed by: dlo

QC Ref #431678 - 525 Semivolatiles by GC/MS Analysis Date: 06/06/2008

2805210356 4762 Analyzed by: jxt

QC Ref #434128 - Perfluorinated compounds Analysis Date: 05/25/2008

2805210356 4762 Analyzed by: ali

Laboratory
QC Report
#241713

Locus Technologies

QC Ref #429644 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	05230035	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	2.26	NGL	113.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	2.58	NGL	129.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	7.58	NGL	75.8	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	7.95	NGL	79.5	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	113.000	129.000	NGL	13.2	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	75.800	79.500	NGL	4.8	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	129	%R	129.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	122	%R	122.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	123	%R	123.0		
MS	NDMA-d6(Internal Standard)	100	116	%R	116.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	129.000	122.000	%R	5.6	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	116.000	117.000	%R	0.9	(0-20)	

QC Ref #431678 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.86	UGL	93.0	(70-130)	
LCS2	2,4-Dinitrotoluene	2	2.01	UGL	100.5	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MS	2,4-Dinitrotoluene	2	1.93	UGL	96.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	93.000	100.500	UGL	7.8	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.87	UGL	93.5	(70-130)	
LCS2	2,6-Dinitrotoluene	2	1.90	UGL	95.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MS	2,6-Dinitrotoluene	2	1.83	UGL	91.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	93.500	95.000	UGL	1.6	(0-20)	
LCS1	Alpha-BHC	2	2.03	UGL	101.5	(70-130)	
LCS2	Alpha-BHC	2	2.01	UGL	100.5	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Alpha-BHC	2	2.03	UGL	101.5	(70-130)
LCS1	alpha-Chlordane	2	2.06	UGL	103.0	(70-130)
LCS2	alpha-Chlordane	2	2.08	UGL	104.0	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MS	alpha-Chlordane	2	1.95	UGL	97.5	(70-130)
RPD_LCS	alpha-Chlordane	103.000	104.000	UGL	1.0	(0-20)
LCS1	Diazinon (Qualitative)	2	2.02	UGL	101.0	(70-130)
LCS2	Diazinon (Qualitative)	2	2.00	UGL	100.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MS	Diazinon (Qualitative)	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	101.000	100.000	UGL	1.0	(0-20)
MS	Spiked sample	Lab # 28	05210175	NONE		(0-0)
LCS1	Acenaphthene	2	1.94	UGL	97.0	(70-130)
LCS2	Acenaphthene	2	1.92	UGL	96.0	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MS	Acenaphthene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Acenaphthene	97.000	96.000	UGL	1.0	(0-20)
LCS1	Acenaphthylene	2	2.01	UGL	100.5	(70-130)
LCS2	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MS	Acenaphthylene	2	1.98	UGL	99.0	(70-130)
RPD_LCS	Acenaphthylene	100.500	99.000	UGL	1.5	(0-20)
LCS1	Acetochlor	2	2.03	UGL	101.5	(70-130)
LCS2	Acetochlor	2	2.06	UGL	103.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MS	Acetochlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Acetochlor	101.500	103.000	UGL	1.5	(0-20)
LCS1	Alachlor	2	2.03	UGL	101.5	(70-130)
LCS2	Alachlor	2	2.01	UGL	100.5	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MS	Alachlor	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Alachlor	101.500	100.500	UGL	1.0	(0-20)
LCS1	Aldrin	2	1.75	UGL	87.5	(70-130)
LCS2	Aldrin	2	1.74	UGL	87.0	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MS	Aldrin	2	1.70	UGL	85.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	Aldrin	87.500	87.000	UGL	0.6	(0-20)
LCS1	Anthracene	2	1.93	UGL	96.5	(70-130)
LCS2	Anthracene	2	2.00	UGL	100.0	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLLW	Anthracene	0.02	0.020	UGL	100.0	(50-150)
MS	Anthracene	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Anthracene	96.500	100.000	UGL	3.6	(0-20)
LCS1	Atrazine	2	2.24	UGL	112.0	(70-130)
LCS2	Atrazine	2	2.17	UGL	108.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MS	Atrazine	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Atrazine	112.000	108.500	UGL	3.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.05	UGL	102.5	(70-130)
LCS2	Benz(a)Anthracene	2	2.07	UGL	103.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MS	Benz(a)Anthracene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Benz(a)Anthracene	102.500	103.500	UGL	1.0	(0-20)
LCS1	Benzo(a)pyrene	2	2.09	UGL	104.5	(70-130)
LCS2	Benzo(a)pyrene	2	2.10	UGL	105.0	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLLW	Benzo(a)pyrene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(a)pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Benzo(a)pyrene	104.500	105.000	UGL	0.5	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.14	UGL	107.0	(70-130)
LCS2	Benzo(b)Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(b)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	107.000	107.500	UGL	0.5	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	1.92	UGL	96.0	(70-130)
LCS2	Benzo(g,h,i)Perylene	2	1.94	UGL	97.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MS	Benzo(g,h,i)Perylene	2	1.83	UGL	91.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	96.000	97.000	UGL	1.0	(0-20)
LCS1	Benzo(k)Fluoranthene	2	1.93	UGL	96.5	(70-130)
LCS2	Benzo(k)Fluoranthene	2	1.97	UGL	98.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLLW	Benzo(k)Fluoranthene	0.02	0.020	UGL	100.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	96.500	98.500	UGL	2.1	(0-20)
LCS1	Di(2-Ethylhexyl)phthalate	2	1.96	UGL	98.0	(70-130)
LCS2	Di(2-Ethylhexyl)phthalate	2	1.89	UGL	94.5	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MS	Di(2-Ethylhexyl)phthalate	2	1.87	UGL	93.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	98.000	94.500	UGL	3.6	(0-20)
LCS1	Beta-BHC	2	2.12	UGL	106.0	(70-130)
LCS2	Beta-BHC	2	2.07	UGL	103.5	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MS	Beta-BHC	2	2.04	UGL	102.0	(70-130)
LCS1	Butylbenzylphthalate	2	2.06	UGL	103.0	(70-130)
LCS2	Butylbenzylphthalate	2	2.08	UGL	104.0	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MS	Butylbenzylphthalate	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Butylbenzylphthalate	103.000	104.000	UGL	1.0	(0-20)
LCS1	Bromacil	2	2.02	UGL	101.0	(70-130)
LCS2	Bromacil	2	2.03	UGL	101.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MS	Bromacil	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Bromacil	101.000	101.500	UGL	0.5	(0-20)
LCS1	Butachlor	2	2.20	UGL	110.0	(70-130)
LCS2	Butachlor	2	2.24	UGL	112.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MS	Butachlor	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Butachlor	110.000	112.000	UGL	1.8	(0-20)
LCS1	Caffeine by method 525mod	2	1.63	UGL	81.5	(45-137)
LCS2	Caffeine by method 525mod	2	1.69	UGL	84.5	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.02	UGL		
MS	Caffeine by method 525mod	2	1.63	UGL	81.5	(46-144)
RPD_LCS	Caffeine by method 525mod	81.500	84.500	UGL	3.6	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.09	UGL	104.5	(70-130)
LCS2	Chlorothalonil(Draconil,Bravo)	2	2.00	UGL	100.0	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Chlorothalonil(Draconil,Bravo)	2	2.03	UGL	101.5	(70-130)
LCS1	Chrysene	2	1.95	UGL	97.5	(70-130)
LCS2	Chrysene	2	1.97	UGL	98.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLLW	Chrysene	0.02	0.020	UGL	100.0	(50-150)
MS	Chrysene	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Chrysene	97.500	98.500	UGL	1.0	(0-20)
LCS1	Chlorobenzilate	2	2.07	UGL	103.5	(70-130)
LCS2	Chlorobenzilate	2	2.02	UGL	101.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MS	Chlorobenzilate	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Chlorobenzilate	103.500	101.000	UGL	2.4	(0-20)
LCS1	Chloroneb	2	2.07	UGL	103.5	(70-130)
LCS2	Chloroneb	2	2.05	UGL	102.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MS	Chloroneb	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Chloroneb	103.500	102.500	UGL	1.0	(0-20)
LCS1	Delta-BHC	2	2.13	UGL	106.5	(70-130)
LCS2	Delta-BHC	2	2.04	UGL	102.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MS	Delta-BHC	2	2.02	UGL	101.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.08	UGL	104.0	(70-130)
LCS2	Dibenz(a,h)Anthracene	2	2.14	UGL	107.0	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MS	Dibenz(a,h)Anthracene	2	2.03	UGL	101.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	104.000	107.000	UGL	2.8	(0-20)
LCS1	4,4'-DDD	2	2.10	UGL	105.0	(70-130)
LCS2	4,4'-DDD	2	2.07	UGL	103.5	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MS	4,4'-DDD	2	2.00	UGL	100.0	(70-130)
RPD_LCS	4,4'-DDD	105.000	103.500	UGL	1.4	(0-20)
LCS1	4,4'-DDE	2	1.99	UGL	99.5	(70-130)
LCS2	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	99.500	96.500	UGL	3.1	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	4,4'-DDT	2	2.04	UGL	102.0	(70-130)
LCS2	4,4'-DDT	2	2.06	UGL	103.0	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MS	4,4'-DDT	2	1.95	UGL	97.5	(70-130)
RPD_LCS	4,4'-DDT	102.000	103.000	UGL	1.0	(0-20)
LCS1	Dichlorvos (DDVP)	2	2.36	UGL	118.0	(70-130)
LCS2	Dichlorvos (DDVP)	2	2.33	UGL	116.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MS	Dichlorvos (DDVP)	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Dichlorvos (DDVP)	118.000	116.500	UGL	1.3	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.06	UGL	103.0	(70-130)
LCS2	Di-(2-Ethylhexyl)adipate	2	1.96	UGL	98.0	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MS	Di-(2-Ethylhexyl)adipate	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	103.000	98.000	UGL	5.0	(0-20)
LCS1	Diethylphthalate	2	2.14	UGL	107.0	(70-130)
LCS2	Diethylphthalate	2	2.13	UGL	106.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MS	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Diethylphthalate	107.000	106.500	UGL	0.5	(0-20)
LCS1	Dieldrin	2	2.02	UGL	101.0	(70-130)
LCS2	Dieldrin	2	2.01	UGL	100.5	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MS	Dieldrin	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Dieldrin	101.000	100.500	UGL	0.5	(0-20)
LCS1	Dimethylphthalate	2	2.12	UGL	106.0	(70-130)
LCS2	Dimethylphthalate	2	2.10	UGL	105.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MS	Dimethylphthalate	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Dimethylphthalate	106.000	105.000	UGL	0.9	(0-20)
LCS1	Dimethoate	2	1.49	UGL	74.5	(35-100)
LCS2	Dimethoate	2	1.62	UGL	81.0	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MS	Dimethoate	2	1.42	UGL	71.0	(34-111)
RPD_LCS	Dimethoate	74.500	81.000	UGL	8.4	(0-20)
LCS1	Di-n-Butylphthalate	4	4.05	UGL	101.2	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
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LCS2	Di-n-Butylphthalate	4	4.09	UGL	102.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MS	Di-n-Butylphthalate	4	3.98	UGL	99.5	(70-130)
RPD_LCS	Di-n-Butylphthalate	101.250	102.250	UGL	1.0	(0-20)
LCS1	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS2	Di-N-octylphthalate	2	1.83	UGL	91.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MS	Di-N-octylphthalate	2	1.81	UGL	90.5	(70-130)
RPD_LCS	Di-N-octylphthalate	94.000	91.500	UGL	2.7	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.10	UGL	105.0	(70-130)
LCS2	Chlorpyrifos (Dursban)	2	2.05	UGL	102.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MS	Chlorpyrifos (Dursban)	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	105.000	102.500	UGL	2.4	(0-20)
LCS1	Endrin Aldehyde	2	1.80	UGL	90.0	(70-130)
LCS2	Endrin Aldehyde	2	1.87	UGL	93.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MS	Endrin Aldehyde	2	1.82	UGL	91.0	(70-130)
LCS1	Endrin	2	2.05	UGL	102.5	(70-130)
LCS2	Endrin	2	2.19	UGL	109.5	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MS	Endrin	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Endrin	102.500	109.500	UGL	6.6	(0-20)
LCS1	EPTC	2	2.01	UGL	100.5	(70-130)
LCS2	EPTC	2	1.98	UGL	99.0	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MS	EPTC	2	2.05	UGL	102.5	(70-130)
RPD_LCS	EPTC	100.500	99.000	UGL	1.5	(0-20)
LCS1	Endosulfan I (Alpha)	2	1.96	UGL	98.0	(70-130)
LCS2	Endosulfan I (Alpha)	2	1.98	UGL	99.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MS	Endosulfan I (Alpha)	2	1.77	UGL	88.5	(70-130)
LCS1	Endosulfan II (Beta)	2	2.13	UGL	106.5	(70-130)
LCS2	Endosulfan II (Beta)	2	2.00	UGL	100.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MS	Endosulfan II (Beta)	2	1.95	UGL	97.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Endosulfan Sulfate	2	1.98	UGL	99.0	(70-130)
LCS2	Endosulfan Sulfate	2	2.03	UGL	101.5	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MS	Endosulfan Sulfate	2	1.92	UGL	96.0	(70-130)
LCS1	Fluoranthene	2	2.13	UGL	106.5	(70-130)
LCS2	Fluoranthene	2	2.15	UGL	107.5	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MS	Fluoranthene	2	2.08	UGL	104.0	(70-130)
RPD_LCS	Fluoranthene	106.500	107.500	UGL	0.9	(0-20)
LCS1	Fluorene	2	2.08	UGL	104.0	(70-130)
LCS2	Fluorene	2	2.04	UGL	102.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MS	Fluorene	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Fluorene	104.000	102.000	UGL	1.9	(0-20)
LCS1	gamma-Chlordane	2	2.01	UGL	100.5	(70-130)
LCS2	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MS	gamma-Chlordane	2	2.03	UGL	101.5	(70-130)
RPD_LCS	gamma-Chlordane	100.500	101.500	UGL	1.0	(0-20)
LCS1	Hexachlorobenzene	2	2.02	UGL	101.0	(70-130)
LCS2	Hexachlorobenzene	2	2.08	UGL	104.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MS	Hexachlorobenzene	2	2.05	UGL	102.5	(70-130)
RPD_LCS	Hexachlorobenzene	101.000	104.000	UGL	2.9	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.22	UGL	111.0	(70-130)
LCS2	Hexachlorocyclopentadiene	2	2.17	UGL	108.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MS	Hexachlorocyclopentadiene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	111.000	108.500	UGL	2.3	(0-20)
LCS1	Heptachlor	2	1.99	UGL	99.5	(70-130)
LCS2	Heptachlor	2	2.02	UGL	101.0	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLLW	Heptachlor	0.02	0.030	UGL	150.0	(50-150)
MS	Heptachlor	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Heptachlor	99.500	101.000	UGL	1.5	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.01	UGL	100.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Heptachlor Epoxide (isomer B)	2	2.03	UGL	101.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MS	Heptachlor Epoxide (isomer B)	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	100.500	101.500	UGL	1.0	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.17	UGL	108.5	(70-130)
LCS2	Indeno(1,2,3,c,d)Pyrene	2	2.21	UGL	110.5	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MS	Indeno(1,2,3,c,d)Pyrene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	108.500	110.500	UGL	1.8	(0-20)
LCS1	Isophorone	2	1.79	UGL	89.5	(70-130)
LCS2	Isophorone	2	1.74	UGL	87.0	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MS	Isophorone	2	1.77	UGL	88.5	(70-130)
RPD_LCS	Isophorone	89.500	87.000	UGL	2.8	(0-20)
LCS1	Lindane	2	2.01	UGL	100.5	(70-130)
LCS2	Lindane	2	2.06	UGL	103.0	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLLW	Lindane	0.02	0.030	UGL	150.0	(50-150)
MS	Lindane	2	2.00	UGL	100.0	(70-130)
RPD_LCS	Lindane	100.500	103.000	UGL	2.5	(0-20)
LCS1	Methoxychlor	2	2.11	UGL	105.5	(70-130)
LCS2	Methoxychlor	2	2.07	UGL	103.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MS	Methoxychlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Methoxychlor	105.500	103.500	UGL	1.9	(0-20)
LCS1	Metribuzin	2	1.98	UGL	99.0	(70-130)
LCS2	Metribuzin	2	2.10	UGL	105.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MS	Metribuzin	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Metribuzin	99.000	105.000	UGL	5.9	(0-20)
LCS1	Malathion	2	2.18	UGL	109.0	(70-130)
LCS2	Malathion	2	2.20	UGL	110.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MS	Malathion	2	2.17	UGL	108.5	(70-130)
RPD_LCS	Malathion	109.000	110.000	UGL	0.9	(0-20)
LCS1	Molinate	2	2.13	UGL	106.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS2	Molinate	2	2.08	UGL	104.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MS	Molinate	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Molinate	106.500	104.000	UGL	2.4	(0-20)
LCS1	Metolachlor	2	2.12	UGL	106.0	(70-130)
LCS2	Metolachlor	2	1.93	UGL	96.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MS	Metolachlor	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Metolachlor	106.000	96.500	UGL	9.4	(0-20)
LCS1	Naphthalene	2	1.98	UGL	99.0	(70-130)
LCS2	Naphthalene	2	2.07	UGL	103.5	(70-130)
MBLK	Naphthalene	ND	0.28	UGL	_	
MS	Naphthalene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Naphthalene	99.000	103.500	UGL	4.4	(0-20)
LCS1	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
LCS2	trans-Nonachlor	2	2.14	UGL	107.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MS	trans-Nonachlor	2	2.05	UGL	102.5	(70-130)
RPD_LCS	trans-Nonachlor	107.000	107.000	UGL	0.0	(0-20)
LCS1	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
LCS2	Pentachlorophenol	8	6.88	UGL	86.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	86.000	86.000	UGL	0.0	(0-20)
LCS1	Permethrin (mixed isomers)	4	3.83	UGL	95.8	(70-130)
LCS2	Permethrin (mixed isomers)	4	3.77	UGL	94.2	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MS	Permethrin (mixed isomers)	4	3.79	UGL	94.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	95.750	94.250	UGL	1.6	(0-20)
LCS1	Phenanthrene	2	2.00	UGL	100.0	(70-130)
LCS2	Phenanthrene	2	1.98	UGL	99.0	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLLW	Phenanthrene	0.02	0.020	UGL	100.0	(50-150)
MS	Phenanthrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Phenanthrene	100.000	99.000	UGL	1.0	(0-20)
LCS1	Propachlor	2	2.04	UGL	102.0	(70-130)

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Locus Technologies
(continued)

LCS2	Propachlor	2	2.03	UGL	101.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MS	Propachlor	2	2.01	UGL	100.5	(70-130)
RPD_LCS	Propachlor	102.000	101.500	UGL	0.5	(0-20)
LCS1	Parathion	2	2.18	UGL	109.0	(70-130)
LCS2	Parathion	2	2.04	UGL	102.0	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MS	Parathion	2	1.99	UGL	99.5	(70-130)
RPD_LCS	Parathion	109.000	102.000	UGL	6.6	(0-20)
LCS1	Pyrene	2	2.10	UGL	105.0	(70-130)
LCS2	Pyrene	2	2.12	UGL	106.0	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MS	Pyrene	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Pyrene	105.000	106.000	UGL	0.9	(0-20)
LCS1	Simazine	2	2.12	UGL	106.0	(70-130)
LCS2	Simazine	2	2.04	UGL	102.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MS	Simazine	2	2.15	UGL	107.5	(70-130)
RPD_LCS	Simazine	106.000	102.000	UGL	3.8	(0-20)
LCS1	Perylene-d12	100	94	%R	94.0	(70-130)
LCS2	Perylene-d12	100	94	%R	94.0	(70-130)
MBLK	Perylene-d12	100	80	%R	80.0	
MRLLW	Perylene-d12	100	78	%R	78.0	(70-130)
MS	Perylene-d12	100	87	%R	87.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	(70-130)
LCS2	1,3-dimethyl-2-nitrobenzene	100	95	%R	95.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	97	%R	97.0	
MRLLW	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	(70-130)
LCS1	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS2	Triphenylphosphate	100	106	%R	106.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLLW	Triphenylphosphate	100	103	%R	103.0	(70-130)
MS	Triphenylphosphate	100	104	%R	104.0	(70-130)
LCS1	Thiobencarb	2	2.10	UGL	105.0	(70-130)
LCS2	Thiobencarb	2	2.10	UGL	105.0	(70-130)

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Locus Technologies
(continued)

MBLK	Thiobencarb	ND	<0.2	UGL		
MS	Thiobencarb	2	2.04	UGL	102.0	(70-130)
RPD_LCS	Thiobencarb	105.000	105.000	UGL	0.0	(0-20)
LCS1	Terbacil	2	2.14	UGL	107.0	(70-130)
LCS2	Terbacil	2	2.07	UGL	103.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MS	Terbacil	2	2.09	UGL	104.5	(70-130)
RPD_LCS	Terbacil	107.000	103.500	UGL	3.3	(0-20)
LCS1	Trifluralin	2	2.13	UGL	106.5	(70-130)
LCS2	Trifluralin	2	2.10	UGL	105.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MS	Trifluralin	2	2.13	UGL	106.5	(70-130)
RPD_LCS	Trifluralin	106.500	105.000	UGL	1.4	(0-20)

QC Ref #434128 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	51.2	NGL	102.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	100	102	NGL	102.0	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	112	NGL	112.0	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<50	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.1	NGL	104.2	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	52.5	NGL	105.0	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	52.3	NGL	104.6	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	100	105	NGL	105.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	101	NGL	101.0	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<20	NGL			
MS	Perfluoro octanoic acid - PFOA	50	45.1	NGL	90.2	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	50	45.8	NGL	91.6	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	49.8	NGL	99.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	100	110	NGL	110.0	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	105	NGL	105.0	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<50	NGL			
MS	Perfluoro octanesulfonate-PFOS	50	55.5	NGL	111.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	50	49.4	NGL	98.8	(70-130)	

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Locus Technologies
(continued)

LCS1	Internal Standard	100	98	%R	98.0	(80-120)
LCS2	Internal Standard	100	96	%R	96.0	(80-120)
LCS3	Internal Standard	100	109	%R	109.0	(80-120)
MBLK	Internal Standard	ND	<0	%R		
MS	Internal Standard	100	95	%R	95.0	(80-120)
MSD	Internal Standard	100	104	%R	104.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MWH Laboratories - Monrovia, CA
Lab Report 2008-2297 thru 2305
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 5-28-08 & 5-29-08
May 29, 2008

MP ID	**Sample**	**EDTA mg/L**	**NTA mg/L**
2297-1	2805210171 Project# 241637	< 0.100	< 0.100
2297-2	2805210172 Project# 241637	< 0.100	< 0.100
2298-1	2805210174 Project# 241639	< 0.100	< 0.100
2298-2	2805210175 Project# 241639	< 0.100	< 0.100
2298-3	2805210301 Project# 241639	< 0.100	< 0.100
2299	2805210352 Project# 241710	< 0.100	< 0.100
2300	2805210356 Project# 241713	< 0.100	< 0.100
2301	2805210357 Project# 241714	< 0.100	< 0.100
2302	2805210360 Project# 241718	< 0.100	< 0.100
2303	2805210393 Project# 241727	< 0.100	< 0.100
2304	2805210405 Project# 241728	< 0.100	< 0.100
2305	2805210408 Project# 241730	< 0.100	< 0.100
2305 Dup	2805210408 Project# 241730 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.241	0.247
	QC Value	0.249	0.248
	% Recovery	96.787	99.597
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:______________________________

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-3200; Recycled Water
EML ID: 423730

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 05-22-2008

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-3200; Recycled Water

Date of Sampling: 05-19-2008
Date of Receipt: 05-19-2008
Date of Report: 05-22-2008

HETEROTROPHIC PLATE COUNT REPORT

Location:	1: MW-1	2: MW-2	3: MW-3
Comments (see below)	None	None	None
Lab ID-Version‡:	1862214-1	1862216-1	1862218-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:1	Plate Count Agar 1:1
Setup Time	05/19/2008 at 04:05 PM	05/19/2008 at 04:05 PM	05/19/2008 at 04:05 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	2,000	92	65

Comments:

Location:	4: MW-4	5: SJ/SC treat	6: 4761
Comments (see below)	None	None	None
Lab ID-Version‡:	1862220-1	1862222-1	1862224-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:1	Plate Count Agar 1:1
Setup Time	05/19/2008 at 04:05 PM	05/19/2008 at 04:05 PM	05/19/2008 at 04:05 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	1,200	2	6

Comments:

* Estimated result

‡ A "Version" greater than 1 indicates amended data.

Sample Event 1
10/27/2008

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 482196

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 10-30-2008

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

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EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 10-27-2008
Date of Receipt: 10-27-2008
Date of Report: 10-30-2008

HETEROTROPHIC PLATE COUNT REPORT

Location:	MW1	MW2	MW3
Comments (see below)	None	None	None
Lab ID-Version‡:	2129418-1	2129420-1	2129422-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	10/27/2008 at 03:15 PM	10/27/2008 at 03:15 PM	10/27/2008 at 03:15 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	1,400	1,400	1,700

Comments:

Location:	MW4	L5COMP	L10COMP
Comments (see below)	None	None	None
Lab ID-Version‡:	2129424-1	2129426-1	2129428-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	10/27/2008 at 03:15 PM	10/27/2008 at 03:15 PM	10/27/2008 at 03:15 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	1,600	10,000 (est.*)	2,800

Comments:

Location:	SOURCE
Comments (see below)	None
Lab ID-Version‡:	2129430-1
Sample Type	Water sample
Method	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10
Setup Time	10/27/2008 at 03:15 PM
Incubation Info	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml
CFU/Reporting Unit	3,700 (est.*)

Comments:

* Estimated result

‡ A "Version" greater than 1 indicates amended data.

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 482196

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 10-30-2008
MPN-Standard Bacteria: 11-03-2008

Project SOPs: MPN-Standard Bacteria (100130)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

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EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 10-27-2008
Date of Receipt: 10-27-2008
Date of Report: 11-03-2008

MPN REPORT

Location: MW1 Lab ID-Version‡: 2129417-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	10/27/08 16:00	< 2	-	14
Total Coliform	SM 9221 B	10/27/08 16:00	< 2	-	14
E. coli	SM 9221 F	10/27/08 16:00	< 2	-	14

Comments:

Location: MW2 Lab ID-Version‡: 2129419-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	10/27/08 16:00	< 2	-	14
Total Coliform	SM 9221 B	10/27/08 16:00	< 2	-	14
E. coli	SM 9221 F	10/27/08 16:00	< 2	-	14

Comments:

Location: MW3 Lab ID-Version‡: 2129421-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	10/27/08 16:00	< 2	-	14
Total Coliform	SM 9221 B	10/27/08 16:00	< 2	-	14
E. coli	SM 9221 F	10/27/08 16:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 10-27-2008
Date of Receipt: 10-27-2008
Date of Report: 11-03-2008

MPN REPORT

Location: MW4 | Lab ID-Version‡: 2129423-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	10/27/08 16:00	< 2	-	14
Total Coliform	SM 9221 B	10/27/08 16:00	< 2	-	14
E. coli	SM 9221 F	10/27/08 16:00	< 2	-	14

Comments:

Location: L5COMP | Lab ID-Version‡: 2129425-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	10/27/08 16:00	2	0.01	14
Total Coliform	SM 9221 B	10/27/08 16:00	2	0.01	14
E. coli	SM 9221 F	10/27/08 16:00	< 2	-	14

Comments:

Location: L10COMP | Lab ID-Version‡: 2129427-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	10/27/08 16:00	2	0.01	14
Total Coliform	SM 9221 B	10/27/08 16:00	2	0.01	14
E. coli	SM 9221 F	10/27/08 16:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(650) 829-5800 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 10-27-2008
Date of Receipt: 10-27-2008
Date of Report: 11-03-2008

MPN REPORT

Location: SOURCE

Lab ID-Version‡: 2129429-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	10/27/08 16:00	18	7	48
Total Coliform	SM 9221 B	10/27/08 16:00	18	7	48
E. coli	SM 9221 F	10/27/08 16:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Nov 16 2009
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA
Report#: 257684
Project: RECLAIMED

This report shall not be reproduced except in full, without the written approval of the laboratory.
Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 17 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
Group#: 257684
Project#: RECLAIMED
Proj Mgr: Joseph A. Ureno
Phone: 626-386-1116

The following samples were received from you on **10/28/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id Tests Scheduled	Matrix	Sample Date
2810280278	SOURCE @525PLUS @NDMA @PFC EDTASUB NTASUB	Water	27-oct-2008 11:45:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

MWH Laboratories
MONTGOMERY WATSON HARZA

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

CHAIN OF COUSTODY RECORD

257684

MWH LABS USE ONLY:

LOGIN COMMENTS: * Not Relinquished

SAMPLES CHECKED AGAINST COC BY:

SAMPLES LOGGED IN BY:

SAMPLE TEMP WHEN REC'D AT LAB: [illegible] (Compliance: 6°C or Below)

CONDITION OF BLUE ICE: FROZEN X PARTIALLY FROZEN ___ THAWED ___ (check for yes)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

MWH LABS CLIENT CODE: Locus

P.O.# / JOB # / PROJECT : 77011-07-4200

SAMPLER PRINTED NAME AND SIGNATURE: MURPHY

TAT requested: rush by adv notice only
STD X 1 week ___ 3 day ___ 2 day ___ 1 day ___

COMPLIANCE SAMPLES ☐ - Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☒ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	SAMPLER COMMENTS
[illegible]	1145	SOURCE		FW	X		

* MATRIX TYPES:

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:					
RECEIVED BY:				[illegible]	[illegible]
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #

Date Sampled

Date Received

Joseph Ureno **Your MWL Project Manager**
626-386-1116 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# **49383**

Sampler: please return this paper with your samples

Created by

Order Date
10/20/08
Date Needed
by Client
10/27/08
Date Samples
to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	Comments
13	@NDMA		2 1L amber glass +1ml thio (8%)		
13	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
13	@PFC		1 x 125 ml poly		
13	EDTASUB		1 x 125 ml amber glass, no preservative		
13	NTASUB		125 ml amber glass, no preservative		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

MWH Laboratories
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750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Report
Comments
#257684

Group Comments

Analytical results for EDTA and NTA are submitted by
Metrohm-Peak, Inc. Houston, TX

MWH Laboratories
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Laboratory Hits Report #257684

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
28-oct-2008 18:09:41

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2810280278	SOURCE				
11/10/08	Terbuthylazine		0.1		ug/l	0.1
11/07/08	N-Nitroso dimethylamine (NDMA)		401		ng/l	10
12/03/08	Perfluoro octanesulfonate-PFOS		38		ng/l	5.0
12/03/08	Perfluoro octanoic acid - PFOA		79		ng/l	5.0

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
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1 800 566 LABS (1 800 566 5227)

Laboratory
Data Report
#257684

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
10/28/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
SOURCE (2810280278)			**Sampled on 10/27/08 11:45**					
	11/03/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	11/03/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1
			525 Semivolatiles by GC/MS					
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Terbuthylazine	0.1	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Thiobencarb (ELAP Cert)	ND	ug/l	0.2	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	102	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	92	% Rec		
			(EPA 525.2)	Triphenylphosphate(70-130)	104	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
10/30/08	11/07/08 00:00	458866	(EPA 521/1625)	N-Nitroso dimethylamine (NDMA)	401	ng/l	10	5
			(EPA 521/1625)	NDMA-D6(50-150)-Int Std	85	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	12/03/08 16:30	463091	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	20	1
	12/03/08 16:30	463091	(MWH PFC)	Perfluoro octanoic acid - PFOA	79	ng/l	5.0	1
	12/03/08 16:30	463091	(MWH PFC)	Perfluoro octanesulfonate-PFOS	38	ng/l	5.0	1
			(MWH PFC)	PFOA-C13	122	% Rec		
			(MWH PFC)	PFOS-C13	81.7	% Rec		
			(MWH PFC)	PFBA-C13	94.1	% Rec		

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Laboratory
QC Summary
#257684

Locus Technologies

QC Ref #458866 - N-Nitroso dimethylamine (NDMA) Analysis Date: 11/07/2008

2810280278	SOURCE	Analyzed by: dlo

QC Ref #461049 - 525 Semivolatiles by GC/MS Analysis Date: 11/10/2008

2810280278	SOURCE	Analyzed by: jwc

QC Ref #463091 - Perfluorinated compounds Analysis Date: 12/03/2008

2810280278	SOURCE	Analyzed by: ali

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Laboratory QC Report #257684

Locus Technologies

QC Ref #458866 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	10300003	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	1.52	NGL	76.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	1.78	NGL	89.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	8.60	NGL	86.0	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	8.42	NGL	84.2	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	76.000	89.000	NGL	15.8	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	86.000	84.200	NGL	2.1	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	102	%R	102.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	99	%R	99.0		
MS	NDMA-d6(Internal Standard)	100	102	%R	102.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	96	%R	96.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	117.000	102.000	%R	13.7	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	102.000	96.000	%R	6.1	(0-20)	

QC Ref #461049 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.88	UGL	94.0	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,4-Dinitrotoluene	0.1	0.10	UGL	100.0	(50-150)	
MS	2,4-Dinitrotoluene	2	2.03	UGL	101.5	(70-130)	
LCS1	2,6-Dinitrotoluene	2	1.82	UGL	91.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,6-Dinitrotoluene	0.1	0.090	UGL	90.0	(50-150)	
MS	2,6-Dinitrotoluene	2	1.91	UGL	95.5	(70-130)	
LCS1	Alpha-BHC	2	2.24	UGL	112.0	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			
MRLHI	Alpha-BHC	0.1	0.12	UGL	120.0	(50-150)	
MS	Alpha-BHC	2	2.23	UGL	111.5	(70-130)	
LCS1	alpha-Chlordane	2	2.39	UGL	119.5	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MBLK	alpha-Chlordane	ND	<0.05	UGL		
MRLHI	alpha-Chlordane	0.1	0.11	UGL	110.0	(50-150)
MS	alpha-Chlordane	2	2.23	UGL	111.5	(70-130)
LCS1	Diazinon (Qualitative)	2	2.06	UGL	103.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MRLHI	Diazinon (Qualitative)	0.1	0.090	UGL	90.0	(50-150)
MS	Diazinon (Qualitative)	2	2.21	UGL	110.5	(70-130)
MS	Spiked sample	Lab # 28	10290041	NONE		(0-0)
LCS1	Acenaphthene	2	2.13	UGL	106.5	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MRLHI	Acenaphthene	0.1	0.11	UGL	110.0	(50-150)
MS	Acenaphthene	2	2.10	UGL	105.0	(70-130)
LCS1	Acenaphthylene	2	2.18	UGL	109.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MRLHI	Acenaphthylene	0.1	0.11	UGL	110.0	(50-150)
MS	Acenaphthylene	2	2.14	UGL	107.0	(70-130)
LCS1	Acetochlor	2	2.28	UGL	114.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MRLHI	Acetochlor	0.1	0.14	UGL	140.0	(50-150)
MS	Acetochlor	2	2.27	UGL	113.5	(70-130)
LCS1	Alachlor	2	2.32	UGL	116.0	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLHI	Alachlor	0.1	0.12	UGL	120.0	(50-150)
MS	Alachlor	2	2.27	UGL	113.5	(70-130)
LCS1	Aldrin	2	1.93	UGL	96.5	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MRLHI	Aldrin	0.1	0.11	UGL	110.0	(50-150)
MS	Aldrin	2	1.83	UGL	91.5	(70-130)
LCS1	Anthracene	2	2.05	UGL	102.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLHI	Anthracene	0.1	0.070	UGL	70.0	(50-150)
MS	Anthracene	2	1.94	UGL	97.0	(70-130)
LCS1	Atrazine	2	2.31	UGL	115.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MRLHI	Atrazine	0.1	0.13	UGL	130.0	(50-150)
MS	Atrazine	2	2.35	UGL	117.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Benz(a)Anthracene	2	2.17	UGL	108.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLHI	Benz(a)Anthracene	0.1	0.10	UGL	100.0	(50-150)
MS	Benz(a)Anthracene	2	2.02	UGL	101.0	(70-130)
LCS1	Benzo(a)pyrene	2	2.19	UGL	109.5	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLHI	Benzo(a)pyrene	0.1	0.090	UGL	90.0	(50-150)
MS	Benzo(a)pyrene	2	2.06	UGL	103.0	(70-130)
LCS1	Benzo(b)Fluoranthene	2	2.33	UGL	116.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(b)Fluoranthene	0.1	0.12	UGL	120.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.24	UGL	112.0	(70-130)
LCS1	Benzo(g,h,i)Perylene	2	2.26	UGL	113.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLHI	Benzo(g,h,i)Perylene	0.1	0.11	UGL	110.0	(50-150)
MS	Benzo(g,h,i)Perylene	2	1.93	UGL	96.5	(70-130)
LCS1	Benzo(k)Fluoranthene	2	2.35	UGL	117.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(k)Fluoranthene	0.1	0.12	UGL	120.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.18	UGL	109.0	(70-130)
LCS1	Di(2-Ethylhexyl)phthalate	2	2.16	UGL	108.0	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MRLHI	Di(2-Ethylhexyl)phthalate	0.3	0.44	UGL	146.7	(50-150)
MS	Di(2-Ethylhexyl)phthalate	2	2.07	UGL	103.5	(70-130)
LCS1	Beta-BHC	2	2.26	UGL	113.0	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MRLHI	Beta-BHC	0.1	0.12	UGL	120.0	(50-150)
MS	Beta-BHC	2	2.23	UGL	111.5	(70-130)
LCS1	Butylbenzylphthalate	2	2.31	UGL	115.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MRLHI	Butylbenzylphthalate	0.3	0.34	UGL	113.3	(50-150)
MS	Butylbenzylphthalate	2	2.31	UGL	115.5	(70-130)
LCS1	Bromacil	2	2.17	UGL	108.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MRLHI	Bromacil	0.1	0.12	UGL	120.0	(50-150)
MS	Bromacil	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Butachlor	2	2.12	UGL	106.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLHI	Butachlor	0.1	0.10	UGL	100.0	(50-150)
MS	Butachlor	2	2.14	UGL	107.0	(70-130)
LCS1	Caffeine by method 525mod	2	1.58	UGL	79.0	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MRLHI	Caffeine by method 525mod	0.1	0.080	UGL	80.0	(50-150)
MS	Caffeine by method 525mod	2	1.70	UGL	85.0	(46-144)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.27	UGL	113.5	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MRLHI	Chlorothalonil(Draconil,Bravo)	0.1	0.11	UGL	110.0	(50-150)
MS	Chlorothalonil(Draconil,Bravo)	2	2.13	UGL	106.5	(70-130)
LCS1	Chrysene	2	2.23	UGL	111.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLHI	Chrysene	0.1	0.12	UGL	120.0	(50-150)
MS	Chrysene	2	2.11	UGL	105.5	(70-130)
LCS1	Chlorobenzilate	2	2.32	UGL	116.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MRLHI	Chlorobenzilate	0.1	0.11	UGL	110.0	(50-150)
MS	Chlorobenzilate	2	2.26	UGL	113.0	(70-130)
LCS1	Chloroneb	2	2.27	UGL	113.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MRLHI	Chloroneb	0.1	0.13	UGL	130.0	(50-150)
MS	Chloroneb	2	2.25	UGL	112.5	(70-130)
LCS1	Delta-BHC	2	2.26	UGL	113.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MRLHI	Delta-BHC	0.1	0.12	UGL	120.0	(50-150)
MS	Delta-BHC	2	2.18	UGL	109.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.27	UGL	113.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLHI	Dibenz(a,h)Anthracene	0.1	0.11	UGL	110.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	1.89	UGL	94.5	(70-130)
LCS1	4,4'-DDD	2	2.34	UGL	117.0	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MRLHI	4,4'-DDD	0.1	0.11	UGL	110.0	(50-150)
MS	4,4'-DDD	2	2.20	UGL	110.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	4,4'-DDE	2	2.15	UGL	107.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MRLHI	4,4'-DDE	0.1	0.10	UGL	100.0	(50-150)
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
LCS1	4,4'-DDT	2	2.25	UGL	112.5	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MRLHI	4,4'-DDT	0.1	0.10	UGL	100.0	(50-150)
MS	4,4'-DDT	2	2.09	UGL	104.5	(70-130)
LCS1	Dichlorvos (DDVP)	2	2.13	UGL	106.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLHI	Dichlorvos (DDVP)	0.1	0.11	UGL	110.0	(50-150)
MS	Dichlorvos (DDVP)	2	2.20	UGL	110.0	(70-130)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.17	UGL	108.5	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MRLHI	Di-(2-Ethylhexyl)adipate	0.3	0.30	UGL	100.0	(50-150)
MS	Di-(2-Ethylhexyl)adipate	2	1.89	UGL	94.5	(70-130)
LCS1	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MRLHI	Diethylphthalate	0.3	0.33	UGL	110.0	(50-150)
MS	Diethylphthalate	2	2.27	UGL	113.5	(70-130)
LCS1	Dieldrin	2	2.28	UGL	114.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MRLHI	Dieldrin	0.1	0.10	UGL	100.0	(50-150)
MS	Dieldrin	2	2.19	UGL	109.5	(70-130)
LCS1	Dimethylphthalate	2	2.16	UGL	108.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MRLHI	Dimethylphthalate	0.3	0.32	UGL	106.7	(50-150)
MS	Dimethylphthalate	2	2.18	UGL	109.0	(70-130)
LCS1	Dimethoate	2	1.39	UGL	69.5	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MRLHI	Dimethoate	0.1	0.060	UGL	60.0	(50-150)
MS	Dimethoate	2	1.54	UGL	77.0	(34-111)
LCS1	Di-n-Butylphthalate	4	4.57	UGL	114.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MRLHI	Di-n-Butylphthalate	0.3	0.44	UGL	146.7	(50-150)
MS	Di-n-Butylphthalate	4	4.51	UGL	112.8	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Di-N-octylphthalate	2	2.15	UGL	107.5	(70-130)
MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MRLHI	Di-N-octylphthalate	0.1	0.10	UGL	100.0	(50-150)
MS	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
LCS1	Chlorpyrifos (Dursban)	2	2.35	UGL	117.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLHI	Chlorpyrifos (Dursban)	0.1	0.11	UGL	110.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.30	UGL	115.0	(70-130)
LCS1	Endrin Aldehyde	2	2.01	UGL	100.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MRLHI	Endrin Aldehyde	0.1	0.050	UGL	50.0	(50-150)
MS	Endrin Aldehyde	2	1.98	UGL	99.0	(70-130)
LCS1	Endrin	2	2.44	UGL	122.0	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MRLHI	Endrin	0.1	0.10	UGL	100.0	(50-150)
MS	Endrin	2	2.27	UGL	113.5	(70-130)
LCS1	EPTC	2	2.13	UGL	106.5	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MRLHI	EPTC	0.1	0.12	UGL	120.0	(50-150)
MS	EPTC	2	2.10	UGL	105.0	(70-130)
LCS1	Endosulfan I (Alpha)	2	2.40	UGL	120.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MRLHI	Endosulfan I (Alpha)	0.1	0.12	UGL	120.0	(50-150)
MS	Endosulfan I (Alpha)	2	2.20	UGL	110.0	(70-130)
LCS1	Endosulfan II (Beta)	2	2.44	UGL	122.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MRLHI	Endosulfan II (Beta)	0.1	0.12	UGL	120.0	(50-150)
MS	Endosulfan II (Beta)	2	2.46	UGL	123.0	(70-130)
LCS1	Endosulfan Sulfate	2	2.32	UGL	116.0	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MRLHI	Endosulfan Sulfate	0.1	0.090	UGL	90.0	(50-150)
MS	Endosulfan Sulfate	2	2.19	UGL	109.5	(70-130)
LCS1	Fluoranthene	2	2.28	UGL	114.0	(70-130)
MBLK	Fluoranthene	ND	<0.1	UGL		
MRLHI	Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Fluoranthene	2	2.16	UGL	108.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Fluorene	2	2.24	UGL	112.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MRLHI	Fluorene	0.1	0.11	UGL	110.0	(50-150)
MS	Fluorene	2	2.16	UGL	108.0	(70-130)
LCS1	gamma-Chlordane	2	2.41	UGL	120.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLHI	gamma-Chlordane	0.1	0.13	UGL	130.0	(50-150)
MS	gamma-Chlordane	2	2.26	UGL	113.0	(70-130)
LCS1	Hexachlorobenzene	2	2.12	UGL	106.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MRLHI	Hexachlorobenzene	0.3	0.33	UGL	110.0	(50-150)
MS	Hexachlorobenzene	2	2.07	UGL	103.5	(70-130)
LCS1	Hexachlorocyclopentadiene	2	2.05	UGL	102.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLHI	Hexachlorocyclopentadiene	0.3	0.28	UGL	93.3	(50-150)
MS	Hexachlorocyclopentadiene	2	1.96	UGL	98.0	(70-130)
LCS1	Heptachlor	2	2.05	UGL	102.5	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLHI	Heptachlor	0.1	0.12	UGL	120.0	(50-150)
MS	Heptachlor	2	1.97	UGL	98.5	(70-130)
LCS1	Heptachlor Epoxide (isomer B)	2	2.33	UGL	116.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLHI	Heptachlor Epoxide (isomer B)	0.1	0.090	UGL	90.0	(50-150)
MS	Heptachlor Epoxide (isomer B)	2	2.20	UGL	110.0	(70-130)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.26	UGL	113.0	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		
MRLHI	Indeno(1,2,3,c,d)Pyrene	0.1	0.10	UGL	100.0	(50-150)
MS	Indeno(1,2,3,c,d)Pyrene	2	1.95	UGL	97.5	(70-130)
LCS1	Isophorone	2	1.85	UGL	92.5	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MRLHI	Isophorone	0.1	0.10	UGL	100.0	(50-150)
MS	Isophorone	2	1.84	UGL	92.0	(70-130)
LCS1	Lindane	2	2.43	UGL	121.5	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLHI	Lindane	0.1	0.10	UGL	100.0	(50-150)
MS	Lindane	2	2.27	UGL	113.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Methoxychlor	2	2.31	UGL	115.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MRLHI	Methoxychlor	0.1	0.15	UGL	150.0	(50-150)
MS	Methoxychlor	2	2.35	UGL	117.5	(70-130)
LCS1	Metribuzin	2	2.18	UGL	109.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLHI	Metribuzin	0.1	0.11	UGL	110.0	(50-150)
MS	Metribuzin	2	2.24	UGL	112.0	(70-130)
LCS1	Malathion	2	2.36	UGL	118.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MRLHI	Malathion	0.1	0.10	UGL	100.0	(50-150)
MS	Malathion	2	2.28	UGL	114.0	(70-130)
LCS1	Molinate	2	2.22	UGL	111.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MRLHI	Molinate	0.1	0.12	UGL	120.0	(50-150)
MS	Molinate	2	2.23	UGL	111.5	(70-130)
LCS1	Metolachlor	2	2.47	UGL	123.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLHI	Metolachlor	0.1	0.12	UGL	120.0	(50-150)
MS	Metolachlor	2	2.45	UGL	122.5	(70-130)
LCS1	Naphthalene	2	2.03	UGL	101.5	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MRLHI	Naphthalene	0.1	0.11	UGL	110.0	(50-150)
MS	Naphthalene	2	1.88	UGL	94.0	(70-130)
LCS1	trans-Nonachlor	2	2.18	UGL	109.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MRLHI	trans-Nonachlor	0.1	0.11	UGL	110.0	(50-150)
MS	trans-Nonachlor	2	2.15	UGL	107.5	(70-130)
LCS1	Pentachlorophenol	8	8.16	UGL	102.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MRLHI	Pentachlorophenol	1.2	1.05	UGL	87.5	(50-150)
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
LCS1	Permethrin (mixed isomers)	4	4.56	UGL	114.0	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MRLHI	Permethrin (mixed isomers)	0.2	0.24	UGL	120.0	(50-150)
MS	Permethrin (mixed isomers)	4	4.19	UGL	104.8	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Phenanthrene	2	2.15	UGL	107.5	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLHI	Phenanthrene	0.1	0.11	UGL	110.0	(50-150)
MS	Phenanthrene	2	2.12	UGL	106.0	(70-130)
LCS1	Propachlor	2	2.37	UGL	118.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLHI	Propachlor	0.1	0.10	UGL	100.0	(50-150)
MS	Propachlor	2	2.23	UGL	111.5	(70-130)
LCS1	Parathion	2	2.21	UGL	110.5	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MRLHI	Parathion	0.1	0.11	UGL	110.0	(50-150)
MS	Parathion	2	2.10	UGL	105.0	(70-130)
LCS1	Pyrene	2	2.29	UGL	114.5	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MRLHI	Pyrene	0.1	0.11	UGL	110.0	(50-150)
MS	Pyrene	2	2.18	UGL	109.0	(70-130)
LCS1	Simazine	2	2.24	UGL	112.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MRLHI	Simazine	0.1	0.12	UGL	120.0	(50-150)
MS	Simazine	2	2.31	UGL	115.5	(70-130)
LCS1	Perylene-d12	100	93	%R	93.0	(70-130)
MBLK	Perylene-d12	100	78	%R	78.0	
MRLHI	Perylene-d12	100	87	%R	87.0	(70-130)
MS	Perylene-d12	100	96	%R	96.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	
MRLHI	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	92	%R	92.0	(70-130)
LCS1	Triphenylphosphate	100	104	%R	104.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLHI	Triphenylphosphate	100	105	%R	105.0	(70-130)
MS	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS1	Thiobencarb (ELAP Cert)	2	2.31	UGL	115.5	(70-130)
MBLK	Thiobencarb (ELAP Cert)	ND	<0.2	UGL		
MRLHI	Thiobencarb (ELAP Cert)	0.1	0.11	UGL	110.0	(50-150)
MS	Thiobencarb (ELAP Cert)	2	2.24	UGL	112.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Terbacil	2	2.17	UGL	108.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MRLHI	Terbacil	0.1	0.13	UGL	130.0	(50-150)
MS	Terbacil	2	2.11	UGL	105.5	(70-130)
LCS1	Trifluralin	2	2.40	UGL	120.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MRLHI	Trifluralin	0.1	0.10	UGL	100.0	(50-150)
MS	Trifluralin	2	2.41	UGL	120.5	(70-130)

QC Ref #463091 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	49.2	NGL	98.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	50	48.9	NGL	97.8	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	89.7	NGL	89.7	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.0	NGL	104.0	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	48.7	NGL	97.4	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	45.7	NGL	91.4	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	50	46.5	NGL	93.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	77.2	NGL	77.2	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	100	89	NGL	89.0	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	100	70	NGL	70.0	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	53.8	NGL	107.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	50	45.6	NGL	91.2	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	95.6	NGL	95.6	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
MS	Perfluoro octanesulfonate-PFOS	100	100	NGL	100.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	100	82	NGL	82.0	(70-130)	
LCS1	Internal Standard	100	98.2	%R	98.2	(80-120)	
LCS2	Internal Standard	100	102	%R	102.0	(80-120)	
LCS3	Internal Standard	100	102	%R	102.0	(80-120)	
MBLK	Internal Standard	ND	81.5	%R			
MS	Internal Standard	100	88.4	%R	88.4	(80-120)	

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Locus Technologies
(continued)

MSD	Internal Standard	100	88.0	%R	88.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

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RECEIVED
DEC 22 2008
BY:

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Dec 05 2008
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA

Report#: 257685
Project: RECLAIMED

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 6 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
Group#: 257685
Project#: RECLAIMED
Proj Mgr: Joseph A. Ureno
Phone: 626-386-1116

The following samples were received from you on **10/28/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2810280279	L5 COMP	@NDMA @PFC	Water	27-oct-2008
2810280280	L10 COMP	@NDMA @PFC EDTASUB	Water	27-oct-2008

Test Acronym Description

Test Acronym	Description
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract

MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

25708 5

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY: PAGE 2 OF 2

LOGIN COMMENTS: NDMA BOTTLES FOR SITE
L10 COMP REC @ 50% FULL

SAMPLES CHECKED AGAINST COC BY:

SAMPLES LOGGED IN BY:

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 6° or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN X PARTIALLY FROZEN ___ THAWED ___ *(check for yes)*

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies	SYSTEM #:	COMPLIANCE SAMPLES ☐ - Requires state forms ☐ NON-COMPLIANCE SAMPLES ☐ *(check for yes)* REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...) Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION
MWH LABS CLIENT CODE: Locus	P.O.# / JOB # / PROJECT : 27011-07-4200	*SEE ATTACHED BOTTLE ORDER FOR ANALYSES* ☒ (check for yes), *OR* LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):
SAMPLER PRINTED NAME AND SIGNATURE: T MURPHY	TAT requested: rush by adv notice only STD X 1 week __ 3 day __ 2 day __ 1 day __	

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	SAMPLER COMMENTS
10/22/08		L5 COMP		RGW		X	
10/22/08		L10 COMP		RGW		X	

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

* NOT RELINQUISHED

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:					
RECEIVED BY:		F. Martinez	MWH	10/28/08	08:15
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #

Date Sampled

Date Received

Joseph Ureno **Your MWL Project Manager**
626-386-1116 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# **49383**

Sampler: please return this paper with your samples

Created by

Order Date
10/20/08
Date Needed by Client
10/27/08
Date Samples to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	**Comments**
13	@NDMA		2 1L amber glass +1ml thio (8%)		
13	~~@525PLUS~~		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
13	@PFC		1 x 125 ml poly		
13	EDTASUB FOR SAMPLE L10 COMP		1 x 125 ml amber glass, no preservative		
13	~~NTASUB~~		125 ml amber glass, no preservative		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

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Laboratory
Hits Report
#257685

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
28-oct-2008 18:21:45

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2810280279	**L5 COMP**				
10/31/08	N-Nitroso dimethylamine (NDMA)		10		ng/l	2.0
12/03/08	Perfluoro butanoic acid- PFBA		71		ng/l	20
12/03/08	Perfluoro octanoic acid - PFOA		15		ng/l	5.0
	2810280280	**L10 COMP**				
11/07/08	N-Nitroso dimethylamine (NDMA)		23		ng/l	2.0
12/03/08	Perfluoro butanoic acid- PFBA		28		ng/l	20
12/03/08	Perfluoro octanoic acid - PFOA		13		ng/l	5.0

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory Data Report #257685

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
10/28/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
L5 COMP (2810280279) Sampled on 10/27/08 00:00								
			N-Nitroso dimethylamine (NDMA)					
10/30/08	10/31/08 00:00	458866	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	10	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	60	% Rec		
			Perfluorinated compounds					
	12/03/08 16:53	463091	(MWH PFC)	Perfluoro butanoic acid- PFBA	71	ng/l	20	1
	12/03/08 16:53	463091	(MWH PFC)	Perfluoro octanoic acid - PFOA	15	ng/l	5.0	1
	12/03/08 16:53	463091	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	5.0	1
			(MWH PFC)	PFOA-C13	115	% Rec		
			(MWH PFC)	PFBA-C13	94	% Rec		
			(MWH PFC)	PFOS-C13	105	% Rec		
L10 COMP (2810280280) Sampled on 10/27/08 00:00								
	11/04/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
			N-Nitroso dimethylamine (NDMA)					
10/30/08	11/07/08 00:00	458866	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	23	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	58	% Rec		
			Perfluorinated compounds					
	12/03/08 16:55	463091	(MWH PFC)	Perfluoro butanoic acid- PFBA	28	ng/l	20	1
	12/03/08 16:55	463091	(MWH PFC)	Perfluoro octanoic acid - PFOA	13	ng/l	5.0	1
	12/03/08 16:55	463091	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	5.0	1
			(MWH PFC)	PFOS-C13	73.4	% Rec		
			(MWH PFC)	PFBA-C13	91.8	% Rec		
			(MWH PFC)	PFOA-C13	101	% Rec		

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Report
Comments
#257685

Group Comments

Analytical results for EDTA and NTA are submitted by
Metrohm-Peak, Inc. Houston, TX

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Laboratory
QC Summary
#257685

Locus Technologies

QC Ref #458866 - N-Nitroso dimethylamine (NDMA) Analysis Date: 10/31/2008

2810280279	L5 COMP	Analyzed by: dlo
2810280280	L10 COMP	Analyzed by: dlo

QC Ref #463091 - Perfluorinated compounds Analysis Date: 12/03/2008

2810280279	L5 COMP	Analyzed by: ali
2810280280	L10 COMP	Analyzed by: ali

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Laboratory
QC Report
#257685

Locus Technologies

QC Ref #458866 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	10300003	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	1.52	NGL	76.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	1.78	NGL	89.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	8.60	NGL	86.0	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	8.42	NGL	84.2	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	76.000	89.000	NGL	15.8	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	86.000	84.200	NGL	2.1	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	102	%R	102.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	99	%R	99.0		
MS	NDMA-d6(Internal Standard)	100	102	%R	102.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	96	%R	96.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	117.000	102.000	%R	13.7	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	102.000	96.000	%R	6.1	(0-20)	

QC Ref #463091 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	49.2	NGL	98.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	50	48.9	NGL	97.8	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	89.7	NGL	89.7	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.0	NGL	104.0	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	48.7	NGL	97.4	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	45.7	NGL	91.4	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	50	46.5	NGL	93.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	77.2	NGL	77.2	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	100	89	NGL	89.0	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	100	70	NGL	70.0	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	53.8	NGL	107.6	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Perfluoro octanesulfonate-PFOS	50	45.6	NGL	91.2	(70-130)
LCS3	Perfluoro octanesulfonate-PFOS	100	95.6	NGL	95.6	(70-130)
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL		
MS	Perfluoro octanesulfonate-PFOS	100	100	NGL	100.0	(70-130)
MSD	Perfluoro octanesulfonate-PFOS	100	82	NGL	82.0	(70-130)
LCS1	Internal Standard	100	98.2	%R	98.2	(80-120)
LCS2	Internal Standard	100	102	%R	102.0	(80-120)
LCS3	Internal Standard	100	102	%R	102.0	(80-120)
MBLK	Internal Standard	ND	81.5	%R		
MS	Internal Standard	100	88.4	%R	88.4	(80-120)
MSD	Internal Standard	100	88.0	%R	88.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Metrohm-Peak, LLC

Jan/ Locus

MWH Laboratories - Monrovia, CA
Lab Report 2008-4526
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 11-4-08
November 5, 2008

MP ID	**Sample**	**EDTA** **mg/L**	**NTA** **mg/L**
4526-1	2810280280 Project# 257685	< 0.100	< 0.100
4526-1 Dup	2810280280 Project# 257685 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.519	0.542
	QC Value	0.509	0.504
	% Recovery	101.965	107.540
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

CHECKED DEC 08 2008

Report by:____________________________

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

RECEIVED
DEC 22 2008
BY:

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Dec 05 2008
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA

Report#: 257733
Project: RECLAIMED
PO#: 27011-07-420

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are QC Report,QC Summary,Data Report,Hits Report, totaling 6 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
PO#: 27011-07-4200
Group#: 257733
Project#: RECLAIMED
Proj Mgr: Joseph A. Ureno
Phone: 626-386-1116

The following samples were received from you on **10/28/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2810280501	MW1	@NDMA @PFC EDTASUB	Water	27-oct-2008 12:10:00
2810280502	MW2	@NDMA @PFC EDTASUB	Water	27-oct-2008 11:05:00
2810280503	MW3	@NDMA @PFC EDTASUB	Water	27-oct-2008 08:55:00
2810280504	MW4	@NDMA @PFC EDTASUB	Water	27-oct-2008 10:05:00

Test Acronym Description

Test Acronym	Description
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract

MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

257733

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY: PAGE 2 OF 2

LOGIN COMMENTS: ____

SAMPLES CHECKED AGAINST COC BY: ____

SAMPLES LOGGED IN BY: ____

SAMPLE TEMP WHEN REC'D AT LAB: 6C (Compliance: 6° or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

COMPLIANCE SAMPLES ☐ - Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: Locus

P.O.# / JOB # / PROJECT : 27011-07-4200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☑ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE: CASTRO

TAT requested: rush by adv notice only
STD X 1 week __ 3 day __ 2 day __ 1 day __

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	SAMPLER COMMENTS
10/27/10	~~1130~~ 1210	MW1	MW1	RGW	X		
|	1105	MW2	MW2	RGW	X		
|	355	MW3	MW3	RGW	X		
|	1005	MW4	MW4	RGW	X		

* MATRIX TYPES:
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

* Not Relinquished

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:					
RECEIVED BY:			MWH	10/28/10	08:30
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

Page 1

C-O-C# ____

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #
Date Sampled
Date Received

Joseph Ureno **Your MWL Project Manager**
626-386-1116 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# **49383**

Sampler: please return this paper with your samples

Created by

Order Date
10/20/08
Date Needed by Client
10/27/08
Date Samples to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	**Comments**
13	@NDMA		2 1L amber glass +1ml thio (8%)		
13	~~@525PLUS~~		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
13	@PFC		1 x 125 ml poly		
13	EDTASUB		1 x 125 ml amber glass, no preservative		
13	~~NTASUB~~		125 ml amber glass, no preservative		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

OnTrac Shipping Label

OnTrac
On Time Delivery For Less

800.334.5000
ontrac.com

D10010189976976

Date Printed 10/27/2008

Tracking#D10010189976976

Shipped From:
LOCUS TECH
299 FAIRCHILD
MOUNTAIN VIEW, CA 94043

Sent By: CHARLOTTE CHEATHAM
Phone#: (650)960-1640
wgt(lbs): 24
Reference: 27011-07-4200

Ship To Company: **MWH LABORATORIES** **750 ROYAL OAKS DRIVE 100** **MONROVIA, CA 91016** **LAB (926)386-1124**	*Service:* **S** *Sort Code:* **COM** *Special Services:* **Signature Required**

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report
#257733

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
28-oct-2008 22:23:06

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2810280501	MW1				
	2810280502	MW2				
	2810280503	MW3				
	2810280504	MW4				

SUMMARY OF POSITIVE DATA ONLY.

MWH Laboratories
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Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
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Laboratory Data Report #257733

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
10/28/08

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
MW1 (2810280501)			**Sampled on 10/27/08 12:10**					
	11/03/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
			N-Nitroso dimethylamine (NDMA)					
10/30/08	11/01/08 00:00	458866	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	94	% Rec		
			Perfluorinated compounds					
	12/03/08 16:56	463091	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	20	1
	12/03/08 16:56	463091	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	5.0	1
	12/03/08 16:56	463091	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	5.0	1
			(MWH PFC)	PFOS-C13	86.6	% Rec		
			(MWH PFC)	PFBA-C13	94.1	% Rec		
			(MWH PFC)	PFOA-C13	97.9	% Rec		
MW2 (2810280502)			**Sampled on 10/27/08 11:05**					
	11/03/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
			N-Nitroso dimethylamine (NDMA)					
10/30/08	11/06/08 00:00	458866	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	86	% Rec		
			Perfluorinated compounds					
	12/03/08 16:58	463091	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	20	1
	12/03/08 16:58	463091	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	5.0	1
	12/03/08 16:58	463091	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	5.0	1
			(MWH PFC)	PFBA-C13	96	% Rec		
			(MWH PFC)	PFOA-C13	96.1	% Rec		
			(MWH PFC)	PFOS-C13	84	% Rec		

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
MW3 (2810280503)			**Sampled on 10/27/08 08:55**					
	11/03/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
			N-Nitroso dimethylamine (NDMA)					
10/30/08	11/06/08 00:00	458866	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	59	% Rec		
			Perfluorinated compounds					
	12/03/08 16:59	463091	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	20	1
	12/03/08 16:59	463091	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	5.0	1
	12/03/08 16:59	463091	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	5.0	1
			(MWH PFC)	PFBA-C13	92.3	% Rec		
			(MWH PFC)	PFOA-C13	96.0	% Rec		
			(MWH PFC)	PFOS-C13	83.3	% Rec		
MW4 (2810280504)			**Sampled on 10/27/08 10:05**					
	11/03/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
			N-Nitroso dimethylamine (NDMA)					
10/30/08	11/06/08 00:00	458866	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2.0	1
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	81	% Rec		
			Perfluorinated compounds					
	12/03/08 17:02	463091	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	20	1
	12/03/08 17:02	463091	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/l	5.0	1
	12/03/08 17:02	463091	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/l	5.0	1
			(MWH PFC)	PFBA-C13	96.1	% Rec		
			(MWH PFC)	PFOS-C13	98.4	% Rec		
			(MWH PFC)	PFOA-C13	78.6	% Rec		

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Monrovia, California 91016-3629
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Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Summary
#257733

Locus Technologies

QC Ref #458866 - N-Nitroso dimethylamine (NDMA) Analysis Date: 11/01/2008

2810280501	MW1	Analyzed by: dlo
2810280502	MW2	Analyzed by: dlo
2810280503	MW3	Analyzed by: dlo
2810280504	MW4	Analyzed by: dlo

QC Ref #463091 - Perfluorinated compounds Analysis Date: 12/03/2008

2810280501	MW1	Analyzed by: ali
2810280502	MW2	Analyzed by: ali
2810280503	MW3	Analyzed by: ali
2810280504	MW4	Analyzed by: ali

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Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Report
#257733

Locus Technologies

QC Ref #458866 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	10300003	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	1.52	NGL	76.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	1.78	NGL	89.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	8.60	NGL	86.0	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	8.42	NGL	84.2	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	76.000	89.000	NGL	15.8	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	86.000	84.200	NGL	2.1	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	102	%R	102.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	99	%R	99.0		
MS	NDMA-d6(Internal Standard)	100	102	%R	102.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	96	%R	96.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	117.000	102.000	%R	13.7	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	102.000	96.000	%R	6.1	(0-20)	

QC Ref #463091 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	49.2	NGL	98.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	50	48.9	NGL	97.8	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	89.7	NGL	89.7	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.0	NGL	104.0	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	48.7	NGL	97.4	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	45.7	NGL	91.4	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	50	46.5	NGL	93.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	77.2	NGL	77.2	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	100	89	NGL	89.0	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	100	70	NGL	70.0	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	53.8	NGL	107.6	(70-130)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS2	Perfluoro octanesulfonate-PFOS	50	45.6	NGL	91.2	(70-130)
LCS3	Perfluoro octanesulfonate-PFOS	100	95.6	NGL	95.6	(70-130)
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL		
MS	Perfluoro octanesulfonate-PFOS	100	100	NGL	100.0	(70-130)
MSD	Perfluoro octanesulfonate-PFOS	100	82	NGL	82.0	(70-130)
LCS1	Internal Standard	100	98.2	%R	98.2	(80-120)
LCS2	Internal Standard	100	102	%R	102.0	(80-120)
LCS3	Internal Standard	100	102	%R	102.0	(80-120)
MBLK	Internal Standard	ND	81.5	%R		
MS	Internal Standard	100	88.4	%R	88.4	(80-120)
MSD	Internal Standard	100	88.0	%R	88.0	(80-120)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Metrohm-Peak, LLC

JAW/Locus

MWH Laboratories - Monrovia, CA
Lab Report 2008-4513 thru 4515
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 11-3-08 & 11-4-08
November 5, 2008

MP ID	**Sample**	**EDTA** **mg/L**	**NTA** **mg/L**
4513-1	2810280465 Project# 257727	< 0.100	< 0.100
4514-1	2810280501 Project# 257733	< 0.100	< 0.100
4514-2	2810280502 Project# 257733	< 0.100	< 0.100
4514-3	2810280503 Project# 257733	< 0.100	< 0.100
4514-4	2810280504 Project# 257733	< 0.100	< 0.100
4515-1	2810280278 Project# 257684	< 0.100	< 0.100
4515-1 Dup	2810280278 Project# 257684 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.519	0.542
	QC Value	0.509	0.504
	% Recovery	101.965	107.540
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

CHECKED DEC 0 8 2008

Report by:______________________________

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

RECEIVED
DEC 22 2008
BY:

Laboratory Report

for

Locus Technologies
299 Fairchild Dr.

Mountain View , CA 94043

Attention: Norman Wong
Fax: (650) 960-0739

DATE OF ISSUE
Dec 05 2008
MWH LABORATORIES

JAU Joseph A Ureno
Project Manager

01114CA

Report#: 257684
Project: RECLAIMED

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Comments,QC Report,QC Summary,Data Report,Hits Report, totaling 18 page[s].

MWH Laboratories
750 Royal Oaks Drive, Monrovia, CA 91016
PHONE: 626-386-1100/FAX: 626-386-1101

ACKNOWLEDGMENT OF SAMPLES RECEIVED

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043
Attn: Norman Wong
Phone: (650) 641-8258

Customer Code: LOCUS
Group#: 257684
Project#: RECLAIMED
Proj Mgr: Joseph A. Ureno
Phone: 626-386-1116

The following samples were received from you on **10/28/08**. They have been scheduled for the tests listed beside each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample#	Sample Id	Tests Scheduled	Matrix	Sample Date
2810280278	SOURCE	@525PLUS @NDMA @PFC EDTASUB NTASUB	Water	27-oct-2008 11:45:00

Test Acronym Description

Test Acronym	Description
@525PLUS	525 Semivolatiles by GC/MS
@NDMA	N-Nitroso dimethylamine (NDMA)
@PFC	Perfluorinated compounds
EDTASUB	EDTA by Ion Chrom-Subcontract
NTASUB	NTA by Ion Chrom- Subcontract

257684

MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY:

LOGIN COMMENTS: * Not Relinquished

SAMPLES CHECKED AGAINST COC BY:

SAMPLES LOGGED IN BY:

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 6°C or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___ *(check for yes)*

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

COMPLIANCE SAMPLES ☐ - Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ *(check for yes)*

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: Locus

P.O.# / JOB # / PROJECT: Z7011-07-4200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☒ (check for yes), *OR*

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE: MURPHY

TAT requested: rush by adv notice only
STD X 1 week ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	SAMPLER COMMENTS
10/27/08	1145	SOURCE		FW	X		

*** MATRIX TYPES:**

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:					
RECEIVED BY:			MWH	10/28/08	08:41
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #

Date Sampled

Date Received

Joseph Ureno **Your MWL Project Manager**
626-386-1116 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# **49383**

Sampler: please return this paper with your samples

Created by

Order Date
10/20/08

Date Needed by Client
10/27/08

Date Samples to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #
13	@NDMA		2 1L amber glass +1ml thio (8%)	
13	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789
13	@PFC		1 x 125 ml poly	
13	EDTASUB		1 x 125 ml amber glass, no preservative	
13	NTASUB		125 ml amber glass, no preservative	

Comments

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

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Laboratory
Hits Report
#257684

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
28-oct-2008 18:09:41

Analyzed	Sample#	Sample ID	Result	Federal MCL	UNITS	MRL
	2810280278	SOURCE				
11/10/08	Terbuthylazine		0.1		ug/l	0.1
11/07/08	N-Nitroso dimethylamine (NDMA)		401		ng/l	10
12/03/08	Perfluoro octanesulfonate-PFOS		38		ng/l	5.0
12/03/08	Perfluoro octanoic acid - PFOA		79		ng/l	5.0

SUMMARY OF POSITIVE DATA ONLY.

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Laboratory
Data Report
#257684

Locus Technologies
Norman Wong
299 Fairchild Dr.
Mountain View , CA 94043

Samples Received
10/28/08

SOURCE (2810280278) Sampled on 10/27/08 11:45

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	11/03/08 00:00		(EPA 300)	EDTA by Ion Chrom-Subcontract	ND	ug/l	100	1
	11/03/08 00:00		(EPA 300)	NTA by Ion Chrom- Subcontract	ND	ug/l	100	1

525 Semivolatiles by GC/MS

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Alpha-BHC	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	alpha-Chlordane	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Acenaphthene	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Acenaphthylene	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Acetochlor	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Alachlor	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Aldrin	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Anthracene	ND	ug/l	0.02	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Atrazine	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Benz(a)Anthracene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Benzo(a)pyrene	ND	ug/l	0.02	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/l	0.02	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/l	0.02	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/l	0.6	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Beta-BHC	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Butylbenzylphthalate	ND	ug/l	0.5	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Bromacil	ND	ug/l	0.2	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Butachlor	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Caffeine by method 525mod	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Chrysene	ND	ug/l	0.02	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Chlorobenzilate	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Chloroneb	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Delta-BHC	ND	ug/l	0.1	1

Locus Technologies
(continued)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	4,4'-DDD	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	4,4'-DDE	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	4,4'-DDT	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/l	0.6	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Diethylphthalate	ND	ug/l	0.5	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Dieldrin	ND	ug/l	0.2	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Dimethylphthalate	ND	ug/l	0.5	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Dimethoate	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/l	1.0	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Di-N-octylphthalate	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Endrin Aldehyde	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Endrin	ND	ug/l	0.2	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	EPTC	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Endosulfan Sulfate	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Fluoranthene	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Fluorene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	gamma-Chlordane	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Hexachlorobenzene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Heptachlor	ND	ug/l	0.03	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Isophorone	ND	ug/l	0.5	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Lindane	ND	ug/l	0.04	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Methoxychlor	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Metribuzin	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Malathion	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Molinate	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Metolachlor	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Naphthalene	ND	ug/l	0.3	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	trans-Nonachlor	ND	ug/l	0.05	1

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Pentachlorophenol	ND	ug/l	1.0	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Pendimethalin	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Phenanthrene	ND	ug/l	0.04	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Propachlor	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Parathion	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Pyrene	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Simazine	ND	ug/l	0.05	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Terbuthylazine	0.1	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Thiobencarb	ND	ug/l	0.2	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Terbacil	ND	ug/l	0.1	1
11/05/08	11/10/08 20:00	461049	(EPA 525.2)	Trifluralin	ND	ug/l	0.1	1
			(EPA 525.2)	Triphenylphosphate(70-130)	104	% Rec		
			(EPA 525.2)	Perylene-d12(70-130)	92	% Rec		
			(EPA 525.2)	1.3-dimethyl-2-nbenz(70-130)	102	% Rec		

N-Nitroso dimethylamine (NDMA)

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
10/30/08	11/07/08 00:00	458866	(MW/EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	401	ng/l	10	5
			(MW/EPA 1625MOD)	NDMA-D6(50-150)-Int Std	85	% Rec		

Perfluorinated compounds

Prepared	Analyzed	QC Ref#	Method	Analyte	Result	Units	MRL	Dilution
	12/03/08 16:30	463091	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/l	20	1
	12/03/08 16:30	463091	(MWH PFC)	Perfluoro octanoic acid - PFOA	79	ng/l	5.0	1
	12/03/08 16:30	463091	(MWH PFC)	Perfluoro octanesulfonate-PFOS	38	ng/l	5.0	1
			(MWH PFC)	PFOA-C13	122	% Rec		
			(MWH PFC)	PFOS-C13	81.7	% Rec		
			(MWH PFC)	PFBA-C13	94.1	% Rec		

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Report
Comments
#257684

Group Comments

Analytical results for EDTA and NTA are submitted by
Metrohm-Peak, Inc. Houston, TX

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Laboratory
QC Summary
#257684

Locus Technologies

QC Ref #458866 - N-Nitroso dimethylamine (NDMA) Analysis Date: 11/07/2008

2810280278 SOURCE Analyzed by: dlo

QC Ref #461049 - 525 Semivolatiles by GC/MS Analysis Date: 11/10/2008

2810280278 SOURCE Analyzed by: jwc

QC Ref #463091 - Perfluorinated compounds Analysis Date: 12/03/2008

2810280278 SOURCE Analyzed by: ali

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Laboratory
QC Report
#257684

Locus Technologies

QC Ref #458866 N-Nitroso dimethylamine (NDMA)

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
MS	Spiked sample	Lab # 28	10300003	NONE		(0-0)	
LCS1	N-Nitroso dimethylamine (NDMA)	2.0	1.52	NGL	76.0	(70-130)	
LCS2	N-Nitroso dimethylamine (NDMA)	2.0	1.78	NGL	89.0	(70-130)	
MBLK	N-Nitroso dimethylamine (NDMA)	ND	<2.0	NGL			
MS	N-Nitroso dimethylamine (NDMA)	10	8.60	NGL	86.0	(70-130)	
MSD	N-Nitroso dimethylamine (NDMA)	10	8.42	NGL	84.2	(70-130)	
RPD_LCS	N-Nitroso dimethylamine (NDMA)	76.000	89.000	NGL	15.8	(0-20)	
RPD_MS	N-Nitroso dimethylamine (NDMA)	86.000	84.200	NGL	2.1	(0-20)	
LCS1	NDMA-d6(Internal Standard)	100	117	%R	117.0	(50-150)	
LCS2	NDMA-d6(Internal Standard)	100	102	%R	102.0	(50-150)	
MBLK	NDMA-d6(Internal Standard)	100	99	%R	99.0		
MS	NDMA-d6(Internal Standard)	100	102	%R	102.0	(50-150)	
MSD	NDMA-d6(Internal Standard)	100	96	%R	96.0	(50-150)	
RPD_LCS	NDMA-d6(Internal Standard)	117.000	102.000	%R	13.7	(0-20)	
RPD_MS	NDMA-d6(Internal Standard)	102.000	96.000	%R	6.1	(0-20)	

QC Ref #461049 525 Semivolatiles by GC/MS

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	2,4-Dinitrotoluene	2	1.88	UGL	94.0	(70-130)	
MBLK	2,4-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,4-Dinitrotoluene	0.1	0.10	UGL	100.0	(50-150)	
MS	2,4-Dinitrotoluene	2	2.03	UGL	101.5	(70-130)	
RPD_LCS	2,4-Dinitrotoluene	94.000	19.500	UGL	131.3	(0-20)	
LCS1	2,6-Dinitrotoluene	2	1.82	UGL	91.0	(70-130)	
MBLK	2,6-Dinitrotoluene	ND	<0.1	UGL			
MRLHI	2,6-Dinitrotoluene	0.1	0.090	UGL	90.0	(50-150)	
MS	2,6-Dinitrotoluene	2	1.91	UGL	95.5	(70-130)	
RPD_LCS	2,6-Dinitrotoluene	91.000	25.500	UGL	112.4	(0-20)	
LCS1	Alpha-BHC	2	2.24	UGL	112.0	(70-130)	
MBLK	Alpha-BHC	ND	<0.1	UGL			
MRLHI	Alpha-BHC	0.1	0.12	UGL	120.0	(50-150)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Alpha-BHC	2	2.23	UGL	111.5	(70-130)
LCS1	alpha-Chlordane	2	2.39	UGL	119.5	(70-130)
MBLK	alpha-Chlordane	ND	<0.05	UGL		
MRLHI	alpha-Chlordane	0.1	0.11	UGL	110.0	(50-150)
MS	alpha-Chlordane	2	2.23	UGL	111.5	(70-130)
RPD_LCS	alpha-Chlordane	119.500	273.500	UGL	78.4	(0-20)
LCS1	Diazinon (Qualitative)	2	2.06	UGL	103.0	(70-130)
MBLK	Diazinon (Qualitative)	ND	<0.1	UGL		
MRLHI	Diazinon (Qualitative)	0.1	0.090	UGL	90.0	(50-150)
MS	Diazinon (Qualitative)	2	2.21	UGL	110.5	(70-130)
RPD_LCS	Diazinon (Qualitative)	103.000	145.500	UGL	34.2	(0-20)
MS	Spiked sample	Lab # 28	10290041	NONE		(0-0)
LCS1	Acenaphthene	2	2.13	UGL	106.5	(70-130)
MBLK	Acenaphthene	ND	<0.1	UGL		
MRLHI	Acenaphthene	0.1	0.11	UGL	110.0	(50-150)
MS	Acenaphthene	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Acenaphthene	106.500	102.500	UGL	3.8	(0-20)
LCS1	Acenaphthylene	2	2.18	UGL	109.0	(70-130)
MBLK	Acenaphthylene	ND	<0.1	UGL		
MRLHI	Acenaphthylene	0.1	0.11	UGL	110.0	(50-150)
MS	Acenaphthylene	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Acenaphthylene	109.000	78.500	UGL	32.5	(0-20)
LCS1	Acetochlor	2	2.28	UGL	114.0	(70-130)
MBLK	Acetochlor	ND	<0.1	UGL		
MRLHI	Acetochlor	0.1	0.14	UGL	140.0	(50-150)
MS	Acetochlor	2	2.27	UGL	113.5	(70-130)
RPD_LCS	Acetochlor	114.000	45.000	UGL	86.8	(0-20)
LCS1	Alachlor	2	2.32	UGL	116.0	(70-130)
MBLK	Alachlor	ND	<0.05	UGL		
MRLHI	Alachlor	0.1	0.12	UGL	120.0	(50-150)
MS	Alachlor	2	2.27	UGL	113.5	(70-130)
RPD_LCS	Alachlor	116.000	42.500	UGL	92.7	(0-20)
LCS1	Aldrin	2	1.93	UGL	96.5	(70-130)
MBLK	Aldrin	ND	<0.05	UGL		
MRLHI	Aldrin	0.1	0.11	UGL	110.0	(50-150)
MS	Aldrin	2	1.83	UGL	91.5	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	Aldrin	96.500	231.500	UGL	82.3	(0-20)
LCS1	Anthracene	2	2.05	UGL	102.5	(70-130)
MBLK	Anthracene	ND	<0.02	UGL		
MRLHI	Anthracene	0.1	0.070	UGL	70.0	(50-150)
MS	Anthracene	2	1.94	UGL	97.0	(70-130)
RPD_LCS	Anthracene	102.500	83.000	UGL	21.0	(0-20)
LCS1	Atrazine	2	2.31	UGL	115.5	(70-130)
MBLK	Atrazine	ND	<0.05	UGL		
MRLHI	Atrazine	0.1	0.13	UGL	130.0	(50-150)
MS	Atrazine	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Atrazine	115.500	67.000	UGL	53.2	(0-20)
LCS1	Benz(a)Anthracene	2	2.17	UGL	108.5	(70-130)
MBLK	Benz(a)Anthracene	ND	<0.05	UGL		
MRLHI	Benz(a)Anthracene	0.1	0.10	UGL	100.0	(50-150)
MS	Benz(a)Anthracene	2	2.02	UGL	101.0	(70-130)
RPD_LCS	Benz(a)Anthracene	108.500	260.000	UGL	82.2	(0-20)
LCS1	Benzo(a)pyrene	2	2.19	UGL	109.5	(70-130)
MBLK	Benzo(a)pyrene	ND	<0.02	UGL		
MRLHI	Benzo(a)pyrene	0.1	0.090	UGL	90.0	(50-150)
MS	Benzo(a)pyrene	2	2.06	UGL	103.0	(70-130)
RPD_LCS	Benzo(a)pyrene	109.500	90.500	UGL	19.0	(0-20)
LCS1	Benzo(b)Fluoranthene	2	2.33	UGL	116.5	(70-130)
MBLK	Benzo(b)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(b)Fluoranthene	0.1	0.12	UGL	120.0	(50-150)
MS	Benzo(b)Fluoranthene	2	2.24	UGL	112.0	(70-130)
RPD_LCS	Benzo(b)Fluoranthene	116.500	90.500	UGL	25.1	(0-20)
LCS1	Benzo(g,h,i)Perylene	2	2.26	UGL	113.0	(70-130)
MBLK	Benzo(g,h,i)Perylene	ND	<0.05	UGL		
MRLHI	Benzo(g,h,i)Perylene	0.1	0.11	UGL	110.0	(50-150)
MS	Benzo(g,h,i)Perylene	2	1.93	UGL	96.5	(70-130)
RPD_LCS	Benzo(g,h,i)Perylene	113.000	106.500	UGL	5.9	(0-20)
LCS1	Benzo(k)Fluoranthene	2	2.35	UGL	117.5	(70-130)
MBLK	Benzo(k)Fluoranthene	ND	<0.02	UGL		
MRLHI	Benzo(k)Fluoranthene	0.1	0.12	UGL	120.0	(50-150)
MS	Benzo(k)Fluoranthene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Benzo(k)Fluoranthene	117.500	111.000	UGL	5.7	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

LCS1	Di(2-Ethylhexyl)phthalate	2	2.16	UGL	108.0	(70-130)
MBLK	Di(2-Ethylhexyl)phthalate	ND	<0.6	UGL		
MRLHI	Di(2-Ethylhexyl)phthalate	0.3	0.44	UGL	146.7	(50-150)
MS	Di(2-Ethylhexyl)phthalate	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Di(2-Ethylhexyl)phthalate	108.000	121.000	UGL	11.4	(0-20)
LCS1	Beta-BHC	2	2.26	UGL	113.0	(70-130)
MBLK	Beta-BHC	ND	<0.1	UGL		
MRLHI	Beta-BHC	0.1	0.12	UGL	120.0	(50-150)
MS	Beta-BHC	2	2.23	UGL	111.5	(70-130)
LCS1	Butylbenzylphthalate	2	2.31	UGL	115.5	(70-130)
MBLK	Butylbenzylphthalate	ND	<0.5	UGL		
MRLHI	Butylbenzylphthalate	0.3	0.34	UGL	113.3	(50-150)
MS	Butylbenzylphthalate	2	2.31	UGL	115.5	(70-130)
RPD_LCS	Butylbenzylphthalate	115.500	219.500	UGL	62.1	(0-20)
LCS1	Bromacil	2	2.17	UGL	108.5	(70-130)
MBLK	Bromacil	ND	<0.2	UGL		
MRLHI	Bromacil	0.1	0.12	UGL	120.0	(50-150)
MS	Bromacil	2	2.10	UGL	105.0	(70-130)
RPD_LCS	Bromacil	108.500	13.500	UGL	155.7	(0-20)
LCS1	Butachlor	2	2.12	UGL	106.0	(70-130)
MBLK	Butachlor	ND	<0.05	UGL		
MRLHI	Butachlor	0.1	0.10	UGL	100.0	(50-150)
MS	Butachlor	2	2.14	UGL	107.0	(70-130)
RPD_LCS	Butachlor	106.000	137.500	UGL	25.9	(0-20)
LCS1	Caffeine by method 525mod	2	1.58	UGL	79.0	(45-137)
MBLK	Caffeine by method 525mod	ND	<0.05	UGL		
MRLHI	Caffeine by method 525mod	0.1	0.080	UGL	80.0	(50-150)
MS	Caffeine by method 525mod	2	1.70	UGL	85.0	(46-144)
RPD_LCS	Caffeine by method 525mod	79.000	42.500	UGL	60.1	(0-20)
LCS1	Chlorothalonil(Draconil,Bravo)	2	2.27	UGL	113.5	(70-130)
MBLK	Chlorothalonil(Draconil,Bravo)	ND	<0.1	UGL		
MRLHI	Chlorothalonil(Draconil,Bravo)	0.1	0.11	UGL	110.0	(50-150)
MS	Chlorothalonil(Draconil,Bravo)	2	2.13	UGL	106.5	(70-130)
LCS1	Chrysene	2	2.23	UGL	111.5	(70-130)
MBLK	Chrysene	ND	<0.02	UGL		
MRLHI	Chrysene	0.1	0.12	UGL	120.0	(50-150)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MS	Chrysene	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Chrysene	111.500	90.500	UGL	20.8	(0-20)
LCS1	Chlorobenzilate	2	2.32	UGL	116.0	(70-130)
MBLK	Chlorobenzilate	ND	<0.1	UGL		
MRLHI	Chlorobenzilate	0.1	0.11	UGL	110.0	(50-150)
MS	Chlorobenzilate	2	2.26	UGL	113.0	(70-130)
RPD_LCS	Chlorobenzilate	116.000	96.500	UGL	18.4	(0-20)
LCS1	Chloroneb	2	2.27	UGL	113.5	(70-130)
MBLK	Chloroneb	ND	<0.1	UGL		
MRLHI	Chloroneb	0.1	0.13	UGL	130.0	(50-150)
MS	Chloroneb	2	2.25	UGL	112.5	(70-130)
RPD_LCS	Chloroneb	113.500	64.500	UGL	55.1	(0-20)
LCS1	Delta-BHC	2	2.26	UGL	113.0	(70-130)
MBLK	Delta-BHC	ND	<0.1	UGL		
MRLHI	Delta-BHC	0.1	0.12	UGL	120.0	(50-150)
MS	Delta-BHC	2	2.18	UGL	109.0	(70-130)
LCS1	Dibenz(a,h)Anthracene	2	2.27	UGL	113.5	(70-130)
MBLK	Dibenz(a,h)Anthracene	ND	<0.05	UGL		
MRLHI	Dibenz(a,h)Anthracene	0.1	0.11	UGL	110.0	(50-150)
MS	Dibenz(a,h)Anthracene	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Dibenz(a,h)Anthracene	113.500	106.000	UGL	6.8	(0-20)
LCS1	4,4'-DDD	2	2.34	UGL	117.0	(70-130)
MBLK	4,4'-DDD	ND	<0.1	UGL		
MRLHI	4,4'-DDD	0.1	0.11	UGL	110.0	(50-150)
MS	4,4'-DDD	2	2.20	UGL	110.0	(70-130)
RPD_LCS	4,4'-DDD	117.000	272.000	UGL	79.7	(0-20)
LCS1	4,4'-DDE	2	2.15	UGL	107.5	(70-130)
MBLK	4,4'-DDE	ND	<0.1	UGL		
MRLHI	4,4'-DDE	0.1	0.10	UGL	100.0	(50-150)
MS	4,4'-DDE	2	1.93	UGL	96.5	(70-130)
RPD_LCS	4,4'-DDE	107.500	368.000	UGL	109.6	(0-20)
LCS1	4,4'-DDT	2	2.25	UGL	112.5	(70-130)
MBLK	4,4'-DDT	ND	<0.1	UGL		
MRLHI	4,4'-DDT	0.1	0.10	UGL	100.0	(50-150)
MS	4,4'-DDT	2	2.09	UGL	104.5	(70-130)
RPD_LCS	4,4'-DDT	112.500	355.500	UGL	103.8	(0-20)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

LCS1	Dichlorvos (DDVP)	2	2.13	UGL	106.5	(70-130)
MBLK	Dichlorvos (DDVP)	ND	<0.05	UGL		
MRLHI	Dichlorvos (DDVP)	0.1	0.11	UGL	110.0	(50-150)
MS	Dichlorvos (DDVP)	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Dichlorvos (DDVP)	106.500	26.000	UGL	121.5	(0-20)
LCS1	Di-(2-Ethylhexyl)adipate	2	2.17	UGL	108.5	(70-130)
MBLK	Di-(2-Ethylhexyl)adipate	ND	<0.6	UGL		
MRLHI	Di-(2-Ethylhexyl)adipate	0.3	0.30	UGL	100.0	(50-150)
MS	Di-(2-Ethylhexyl)adipate	2	1.89	UGL	94.5	(70-130)
RPD_LCS	Di-(2-Ethylhexyl)adipate	108.500	471.000	UGL	125.1	(0-20)
LCS1	Diethylphthalate	2	2.17	UGL	108.5	(70-130)
MBLK	Diethylphthalate	ND	<0.5	UGL		
MRLHI	Diethylphthalate	0.3	0.33	UGL	110.0	(50-150)
MS	Diethylphthalate	2	2.27	UGL	113.5	(70-130)
RPD_LCS	Diethylphthalate	108.500	81.500	UGL	28.4	(0-20)
LCS1	Dieldrin	2	2.28	UGL	114.0	(70-130)
MBLK	Dieldrin	ND	<0.2	UGL		
MRLHI	Dieldrin	0.1	0.10	UGL	100.0	(50-150)
MS	Dieldrin	2	2.19	UGL	109.5	(70-130)
RPD_LCS	Dieldrin	114.000	170.500	UGL	39.7	(0-20)
LCS1	Dimethylphthalate	2	2.16	UGL	108.0	(70-130)
MBLK	Dimethylphthalate	ND	<0.5	UGL		
MRLHI	Dimethylphthalate	0.3	0.32	UGL	106.7	(50-150)
MS	Dimethylphthalate	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Dimethylphthalate	108.000	26.000	UGL	122.4	(0-20)
LCS1	Dimethoate	2	1.39	UGL	69.5	(35-100)
MBLK	Dimethoate	ND	<0.1	UGL		
MRLHI	Dimethoate	0.1	0.060	UGL	60.0	(50-150)
MS	Dimethoate	2	1.54	UGL	77.0	(34-111)
RPD_LCS	Dimethoate	69.500	42.000	UGL	49.3	(0-20)
LCS1	Di-n-Butylphthalate	4	4.57	UGL	114.2	(70-130)
MBLK	Di-n-Butylphthalate	ND	<1.0	UGL		
MRLHI	Di-n-Butylphthalate	0.3	0.44	UGL	146.7	(50-150)
MS	Di-n-Butylphthalate	4	4.51	UGL	112.8	(70-130)
RPD_LCS	Di-n-Butylphthalate	114.250	199.750	UGL	54.5	(0-20)
LCS1	Di-N-octylphthalate	2	2.15	UGL	107.5	(70-130)

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Locus Technologies
(continued)

MBLK	Di-N-octylphthalate	ND	<0.1	UGL		
MRLHI	Di-N-octylphthalate	0.1	0.10	UGL	100.0	(50-150)
MS	Di-N-octylphthalate	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Di-N-octylphthalate	107.500	106.000	UGL	1.4	(0-20)
LCS1	Chlorpyrifos (Dursban)	2	2.35	UGL	117.5	(70-130)
MBLK	Chlorpyrifos (Dursban)	ND	<0.05	UGL		
MRLHI	Chlorpyrifos (Dursban)	0.1	0.11	UGL	110.0	(50-150)
MS	Chlorpyrifos (Dursban)	2	2.30	UGL	115.0	(70-130)
RPD_LCS	Chlorpyrifos (Dursban)	117.500	169.500	UGL	36.2	(0-20)
LCS1	Endrin Aldehyde	2	2.01	UGL	100.5	(70-130)
MBLK	Endrin Aldehyde	ND	<0.1	UGL		
MRLHI	Endrin Aldehyde	0.1	0.050	UGL	50.0	(50-150)
MS	Endrin Aldehyde	2	1.98	UGL	99.0	(70-130)
LCS1	Endrin	2	2.44	UGL	122.0	(70-130)
MBLK	Endrin	ND	<0.2	UGL		
MRLHI	Endrin	0.1	0.10	UGL	100.0	(50-150)
MS	Endrin	2	2.27	UGL	113.5	(70-130)
RPD_LCS	Endrin	122.000	179.500	UGL	38.1	(0-20)
LCS1	EPTC	2	2.13	UGL	106.5	(70-130)
MBLK	EPTC	ND	<0.1	UGL		
MRLHI	EPTC	0.1	0.12	UGL	120.0	(50-150)
MS	EPTC	2	2.10	UGL	105.0	(70-130)
RPD_LCS	EPTC	106.500	69.500	UGL	42.0	(0-20)
LCS1	Endosulfan I (Alpha)	2	2.40	UGL	120.0	(70-130)
MBLK	Endosulfan I (Alpha)	ND	<0.1	UGL		
MRLHI	Endosulfan I (Alpha)	0.1	0.12	UGL	120.0	(50-150)
MS	Endosulfan I (Alpha)	2	2.20	UGL	110.0	(70-130)
LCS1	Endosulfan II (Beta)	2	2.44	UGL	122.0	(70-130)
MBLK	Endosulfan II (Beta)	ND	<0.1	UGL		
MRLHI	Endosulfan II (Beta)	0.1	0.12	UGL	120.0	(50-150)
MS	Endosulfan II (Beta)	2	2.46	UGL	123.0	(70-130)
LCS1	Endosulfan Sulfate	2	2.32	UGL	116.0	(70-130)
MBLK	Endosulfan Sulfate	ND	<0.1	UGL		
MRLHI	Endosulfan Sulfate	0.1	0.090	UGL	90.0	(50-150)
MS	Endosulfan Sulfate	2	2.19	UGL	109.5	(70-130)
LCS1	Fluoranthene	2	2.28	UGL	114.0	(70-130)

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MBLK	Fluoranthene	ND	<0.1	UGL		
MRLHI	Fluoranthene	0.1	0.10	UGL	100.0	(50-150)
MS	Fluoranthene	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Fluoranthene	114.000	155.000	UGL	30.5	(0-20)
LCS1	Fluorene	2	2.24	UGL	112.0	(70-130)
MBLK	Fluorene	ND	<0.05	UGL		
MRLHI	Fluorene	0.1	0.11	UGL	110.0	(50-150)
MS	Fluorene	2	2.16	UGL	108.0	(70-130)
RPD_LCS	Fluorene	112.000	154.000	UGL	31.6	(0-20)
LCS1	gamma-Chlordane	2	2.41	UGL	120.5	(70-130)
MBLK	gamma-Chlordane	ND	<0.05	UGL		
MRLHI	gamma-Chlordane	0.1	0.13	UGL	130.0	(50-150)
MS	gamma-Chlordane	2	2.26	UGL	113.0	(70-130)
RPD_LCS	gamma-Chlordane	120.500	283.500	UGL	80.7	(0-20)
LCS1	Hexachlorobenzene	2	2.12	UGL	106.0	(70-130)
MBLK	Hexachlorobenzene	ND	<0.05	UGL		
MRLHI	Hexachlorobenzene	0.3	0.33	UGL	110.0	(50-150)
MS	Hexachlorobenzene	2	2.07	UGL	103.5	(70-130)
RPD_LCS	Hexachlorobenzene	106.000	445.500	UGL	123.1	(0-20)
LCS1	Hexachlorocyclopentadiene	2	2.05	UGL	102.5	(70-130)
MBLK	Hexachlorocyclopentadiene	ND	<0.05	UGL		
MRLHI	Hexachlorocyclopentadiene	0.3	0.28	UGL	93.3	(50-150)
MS	Hexachlorocyclopentadiene	2	1.96	UGL	98.0	(70-130)
RPD_LCS	Hexachlorocyclopentadiene	102.500	383.000	UGL	115.6	(0-20)
LCS1	Heptachlor	2	2.05	UGL	102.5	(70-130)
MBLK	Heptachlor	ND	<0.03	UGL		
MRLHI	Heptachlor	0.1	0.12	UGL	120.0	(50-150)
MS	Heptachlor	2	1.97	UGL	98.5	(70-130)
RPD_LCS	Heptachlor	102.500	210.000	UGL	68.8	(0-20)
LCS1	Heptachlor Epoxide (isomer B)	2	2.33	UGL	116.5	(70-130)
MBLK	Heptachlor Epoxide (isomer B)	ND	<0.05	UGL		
MRLHI	Heptachlor Epoxide (isomer B)	0.1	0.090	UGL	90.0	(50-150)
MS	Heptachlor Epoxide (isomer B)	2	2.20	UGL	110.0	(70-130)
RPD_LCS	Heptachlor Epoxide (isomer B)	116.500	136.000	UGL	15.4	(0-20)
LCS1	Indeno(1,2,3,c,d)Pyrene	2	2.26	UGL	113.0	(70-130)
MBLK	Indeno(1,2,3,c,d)Pyrene	ND	<0.05	UGL		

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MRLHI	Indeno(1,2,3,c,d)Pyrene	0.1	0.10	UGL	100.0	(50-150)
MS	Indeno(1,2,3,c,d)Pyrene	2	1.95	UGL	97.5	(70-130)
RPD_LCS	Indeno(1,2,3,c,d)Pyrene	113.000	104.500	UGL	7.8	(0-20)
LCS1	Isophorone	2	1.85	UGL	92.5	(70-130)
MBLK	Isophorone	ND	<0.5	UGL		
MRLHI	Isophorone	0.1	0.10	UGL	100.0	(50-150)
MS	Isophorone	2	1.84	UGL	92.0	(70-130)
RPD_LCS	Isophorone	92.500	22.000	UGL	123.1	(0-20)
LCS1	Lindane	2	2.43	UGL	121.5	(70-130)
MBLK	Lindane	ND	<0.04	UGL		
MRLHI	Lindane	0.1	0.10	UGL	100.0	(50-150)
MS	Lindane	2	2.27	UGL	113.5	(70-130)
RPD_LCS	Lindane	121.500	96.000	UGL	23.4	(0-20)
LCS1	Methoxychlor	2	2.31	UGL	115.5	(70-130)
MBLK	Methoxychlor	ND	<0.1	UGL		
MRLHI	Methoxychlor	0.1	0.15	UGL	150.0	(50-150)
MS	Methoxychlor	2	2.35	UGL	117.5	(70-130)
RPD_LCS	Methoxychlor	115.500	53.000	UGL	74.2	(0-20)
LCS1	Metribuzin	2	2.18	UGL	109.0	(70-130)
MBLK	Metribuzin	ND	<0.05	UGL		
MRLHI	Metribuzin	0.1	0.11	UGL	110.0	(50-150)
MS	Metribuzin	2	2.24	UGL	112.0	(70-130)
RPD_LCS	Metribuzin	109.000	13.000	UGL	157.4	(0-20)
LCS1	Malathion	2	2.36	UGL	118.0	(70-130)
MBLK	Malathion	ND	<0.1	UGL		
MRLHI	Malathion	0.1	0.10	UGL	100.0	(50-150)
MS	Malathion	2	2.28	UGL	114.0	(70-130)
RPD_LCS	Malathion	118.000	64.000	UGL	59.3	(0-20)
LCS1	Molinate	2	2.22	UGL	111.0	(70-130)
MBLK	Molinate	ND	<0.1	UGL		
MRLHI	Molinate	0.1	0.12	UGL	120.0	(50-150)
MS	Molinate	2	2.23	UGL	111.5	(70-130)
RPD_LCS	Molinate	111.000	58.000	UGL	62.7	(0-20)
LCS1	Metolachlor	2	2.47	UGL	123.5	(70-130)
MBLK	Metolachlor	ND	<0.05	UGL		
MRLHI	Metolachlor	0.1	0.12	UGL	120.0	(50-150)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

MS	Metolachlor	2	2.45	UGL	122.5	(70-130)
RPD_LCS	Metolachlor	123.500	50.500	UGL	83.9	(0-20)
LCS1	Naphthalene	2	2.03	UGL	101.5	(70-130)
MBLK	Naphthalene	ND	<0.3	UGL		
MRLHI	Naphthalene	0.1	0.11	UGL	110.0	(50-150)
MS	Naphthalene	2	1.88	UGL	94.0	(70-130)
RPD_LCS	Naphthalene	101.500	63.500	UGL	46.1	(0-20)
LCS1	trans-Nonachlor	2	2.18	UGL	109.0	(70-130)
MBLK	trans-Nonachlor	ND	<0.05	UGL		
MRLHI	trans-Nonachlor	0.1	0.11	UGL	110.0	(50-150)
MS	trans-Nonachlor	2	2.15	UGL	107.5	(70-130)
RPD_LCS	trans-Nonachlor	109.000	316.500	UGL	97.5	(0-20)
LCS1	Pentachlorophenol	8	8.16	UGL	102.0	(70-130)
MBLK	Pentachlorophenol	ND	<1.0	UGL		
MRLHI	Pentachlorophenol	1.2	1.05	UGL	87.5	(50-150)
MS	Pentachlorophenol	8	8.24	UGL	103.0	(70-130)
RPD_LCS	Pentachlorophenol	102.000	44.500	UGL	78.5	(0-20)
LCS1	Permethrin (mixed isomers)	4	4.56	UGL	114.0	(70-130)
MBLK	Permethrin (mixed isomers)	ND	<0.1	UGL		
MRLHI	Permethrin (mixed isomers)	0.2	0.24	UGL	120.0	(50-150)
MS	Permethrin (mixed isomers)	4	4.19	UGL	104.8	(70-130)
RPD_LCS	Permethrin (mixed isomers)	114.000	111.000	UGL	2.7	(0-20)
LCS1	Phenanthrene	2	2.15	UGL	107.5	(70-130)
MBLK	Phenanthrene	ND	<0.04	UGL		
MRLHI	Phenanthrene	0.1	0.11	UGL	110.0	(50-150)
MS	Phenanthrene	2	2.12	UGL	106.0	(70-130)
RPD_LCS	Phenanthrene	107.500	96.500	UGL	10.8	(0-20)
LCS1	Propachlor	2	2.37	UGL	118.5	(70-130)
MBLK	Propachlor	ND	<0.05	UGL		
MRLHI	Propachlor	0.1	0.10	UGL	100.0	(50-150)
MS	Propachlor	2	2.23	UGL	111.5	(70-130)
RPD_LCS	Propachlor	118.500	42.000	UGL	95.3	(0-20)
LCS1	Parathion	2	2.21	UGL	110.5	(70-130)
MBLK	Parathion	ND	<0.1	UGL		
MRLHI	Parathion	0.1	0.11	UGL	110.0	(50-150)
MS	Parathion	2	2.10	UGL	105.0	(70-130)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Locus Technologies
(continued)

RPD_LCS	Parathion	110.500	64.000	UGL	53.3	(0-20)
LCS1	Pyrene	2	2.29	UGL	114.5	(70-130)
MBLK	Pyrene	ND	<0.05	UGL		
MRLHI	Pyrene	0.1	0.11	UGL	110.0	(50-150)
MS	Pyrene	2	2.18	UGL	109.0	(70-130)
RPD_LCS	Pyrene	114.500	160.500	UGL	33.5	(0-20)
LCS1	Simazine	2	2.24	UGL	112.0	(70-130)
MBLK	Simazine	ND	<0.05	UGL		
MRLHI	Simazine	0.1	0.12	UGL	120.0	(50-150)
MS	Simazine	2	2.31	UGL	115.5	(70-130)
RPD_LCS	Simazine	112.000	62.500	UGL	56.7	(0-20)
LCS1	Perylene-d12	100	93	%R	93.0	(70-130)
MBLK	Perylene-d12	100	78	%R	78.0	
MRLHI	Perylene-d12	100	87	%R	87.0	(70-130)
MS	Perylene-d12	100	96	%R	96.0	(70-130)
LCS1	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MBLK	1,3-dimethyl-2-nitrobenzene	100	98	%R	98.0	
MRLHI	1,3-dimethyl-2-nitrobenzene	100	96	%R	96.0	(70-130)
MS	1,3-dimethyl-2-nitrobenzene	100	92	%R	92.0	(70-130)
LCS1	Triphenylphosphate	100	104	%R	104.0	(70-130)
MBLK	Triphenylphosphate	100	105	%R	105.0	
MRLHI	Triphenylphosphate	100	105	%R	105.0	(70-130)
MS	Triphenylphosphate	100	106	%R	106.0	(70-130)
LCS1	Thiobencarb	2	2.31	UGL	115.5	(70-130)
MBLK	Thiobencarb	ND	<0.2	UGL		
MRLHI	Thiobencarb	0.1	0.11	UGL	110.0	(50-150)
MS	Thiobencarb	2	2.24	UGL	112.0	(70-130)
RPD_LCS	Thiobencarb	115.500	87.500	UGL	27.6	(0-20)
LCS1	Terbacil	2	2.17	UGL	108.5	(70-130)
MBLK	Terbacil	ND	<0.1	UGL		
MRLHI	Terbacil	0.1	0.13	UGL	130.0	(50-150)
MS	Terbacil	2	2.11	UGL	105.5	(70-130)
RPD_LCS	Terbacil	108.500	21.000	UGL	135.1	(0-20)
LCS1	Trifluralin	2	2.40	UGL	120.0	(70-130)
MBLK	Trifluralin	ND	<0.1	UGL		
MRLHI	Trifluralin	0.1	0.10	UGL	100.0	(50-150)

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

MS	Trifluralin	2	2.41	UGL	120.5	(70-130)	
RPD_LCS	Trifluralin	120.000	375.500	UGL	103.1	(0-20)	

QC Ref #463091 Perfluorinated compounds

QC	Analyte	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPD (%)
LCS1	Perfluoro butanoic acid- PFBA	50	49.2	NGL	98.4	(70-130)	
LCS2	Perfluoro butanoic acid- PFBA	50	48.9	NGL	97.8	(70-130)	
LCS3	Perfluoro butanoic acid- PFBA	100	89.7	NGL	89.7	(70-130)	
MBLK	Perfluoro butanoic acid- PFBA	ND	<20	NGL			
MS	Perfluoro butanoic acid- PFBA	50	52.0	NGL	104.0	(70-130)	
MSD	Perfluoro butanoic acid- PFBA	50	48.7	NGL	97.4	(70-130)	
LCS1	Perfluoro octanoic acid - PFOA	50	45.7	NGL	91.4	(70-130)	
LCS2	Perfluoro octanoic acid - PFOA	50	46.5	NGL	93.0	(70-130)	
LCS3	Perfluoro octanoic acid - PFOA	100	77.2	NGL	77.2	(70-130)	
MBLK	Perfluoro octanoic acid - PFOA	ND	<5.0	NGL			
MS	Perfluoro octanoic acid - PFOA	100	89	NGL	89.0	(70-130)	
MSD	Perfluoro octanoic acid - PFOA	100	70	NGL	70.0	(70-130)	
LCS1	Perfluoro octanesulfonate-PFOS	50	53.8	NGL	107.6	(70-130)	
LCS2	Perfluoro octanesulfonate-PFOS	50	45.6	NGL	91.2	(70-130)	
LCS3	Perfluoro octanesulfonate-PFOS	100	95.6	NGL	95.6	(70-130)	
MBLK	Perfluoro octanesulfonate-PFOS	ND	<5.0	NGL			
MS	Perfluoro octanesulfonate-PFOS	100	100	NGL	100.0	(70-130)	
MSD	Perfluoro octanesulfonate-PFOS	100	82	NGL	82.0	(70-130)	
LCS1	Internal Standard	100	98.2	%R	98.2	(80-120)	
LCS2	Internal Standard	100	102	%R	102.0	(80-120)	
LCS3	Internal Standard	100	102	%R	102.0	(80-120)	
MBLK	Internal Standard	ND	81.5	%R			
MS	Internal Standard	100	88.4	%R	88.4	(80-120)	
MSD	Internal Standard	100	88.0	%R	88.0	(80-120)	

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining. Criteria for MS and DUP are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

Metrohm-Peak, LLC

JAU - Locus

MWH Laboratories - Monrovia, CA
Lab Report 2008-4513 thru 4515
Results Prepared for: Julie Lee / Andrew Eaton
Date of Analysis: 11-3-08 & 11-4-08
November 5, 2008

MP ID	**Sample**	**EDTA** **mg/L**	**NTA** **mg/L**
4513-1	2810280465 Project# 257727	< 0.100	< 0.100
4514-1	2810280501 Project# 257733	< 0.100	< 0.100
4514-2	2810280502 Project# 257733	< 0.100	< 0.100
4514-3	2810280503 Project# 257733	< 0.100	< 0.100
4514-4	2810280504 Project# 257733	< 0.100	< 0.100
4515-1	2810280278 Project# 257684	< 0.100	< 0.100
4515-1 Dup	2810280278 Project# 257684 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.519	0.542
	QC Value	0.509	0.504
	% Recovery	101.965	107.540
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

CHECKED DEC 0 8 2008

Report by:

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Northern California
ACCUTEST
Laboratories

IT'S ALL IN THE CHEMISTRY

11/07/08

Technical Report for

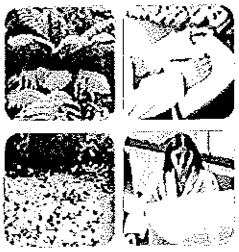
Locus Technologies

Recycled Water Study - San Jose, CA

27011-07-4200

Accutest Job Number: C2791

Sampling Date: 10/27/08



Report to:

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
hawthornej@locustec.com; wongn@locustec.com

ATTN: Wes Hawthorne

Total number of pages in report: 18

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy

Laurie Glantz-Murphy
Laboratory Director

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Client Service contact: Diane Theesen 408-588-0200

Certifications: CA (08258CA)
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Sections: 1 2 3 4

Table of Contents

-1-

Section 1: Sample Summary 3
Section 2: Sample Results 4
2.1: C2791-1: SOURCE 5
2.2: C2791-2: MW1 6
2.3: C2791-3: MW2 7
2.4: C2791-4: MW3 8
2.5: C2791-5: MW4 9
2.6: C2791-6: L10 COMP 10
Section 3: Misc. Forms 11
3.1: Chain of Custody 12
Section 4: General Chemistry - QC Data Summaries 14
4.1: Method Blank and Spike Results Summary 15
4.2: Blank Spike Duplicate Results Summary 16
4.3: Matrix Spike Results Summary 17
4.4: Matrix Spike Duplicate Results Summary 18

Sample Summary

Locus Technologies

Job No: C2791

Recycled Water Study - San Jose, CA
Project No: 27011-07-4200

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
C2791-1	10/27/08	00:00	CM	10/27/08	AQ	Ground Water	SOURCE
C2791-2	10/27/08	00:00	CM	10/27/08	AQ	Ground Water	MW1
C2791-3	10/27/08	00:00	CM	10/27/08	AQ	Ground Water	MW2
C2791-4	10/27/08	00:00	CM	10/27/08	AQ	Ground Water	MW3
C2791-5	10/27/08	00:00	CM	10/27/08	AQ	Ground Water	MW4
C2791-6	10/27/08	00:00	CM	10/27/08	AQ	Ground Water	L10 COMP

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	SOURCE		
Lab Sample ID:	C2791-1	**Date Sampled:**	10/27/08
Matrix:	AQ - Ground Water	**Date Received:**	10/27/08
		Percent Solids:	n/a
Project:	Recycled Water Study - San Jose, CA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Bromide	0.38	0.20	0.065	mg/l	1	10/27/08 19:46	RL	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	MW1		
Lab Sample ID:	C2791-2	**Date Sampled:**	10/27/08
Matrix:	AQ - Ground Water	**Date Received:**	10/27/08
		Percent Solids:	n/a
Project:	Recycled Water Study - San Jose, CA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Bromide	0.065 U	0.20	0.065	mg/l	1	10/27/08 20:04	RL	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	MW2		
Lab Sample ID:	C2791-3	**Date Sampled:**	10/27/08
Matrix:	AQ - Ground Water	**Date Received:**	10/27/08
		Percent Solids:	n/a
Project:	Recycled Water Study - San Jose, CA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Bromide	0.065 U	0.20	0.065	mg/l	1	10/27/08 20:21	RL	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Accutest Laboratories

Report of Analysis

Client Sample ID:	MW3		
Lab Sample ID:	C2791-4	**Date Sampled:**	10/27/08
Matrix:	AQ - Ground Water	**Date Received:**	10/27/08
		Percent Solids:	n/a
Project:	Recycled Water Study - San Jose, CA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Bromide	0.065 U	0.20	0.065	mg/l	1	10/27/08 20:39	RL	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID:	MW4		
Lab Sample ID:	C2791-5	**Date Sampled:**	10/27/08
Matrix:	AQ - Ground Water	**Date Received:**	10/27/08
		Percent Solids:	n/a
Project:	Recycled Water Study - San Jose, CA		

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Bromide	0.065 U	0.20	0.065	mg/l	1	10/27/08 20:56	RL	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: L10 COMP
Lab Sample ID: C2791-6
Matrix: AQ - Ground Water
Date Sampled: 10/27/08
Date Received: 10/27/08
Percent Solids: n/a
Project: Recycled Water Study - San Jose, CA

General Chemistry

Analyte	Result	RL	MDL	Units	DF	Analyzed	By	Method
Bromide	0.15 J	0.20	0.065	mg/l	1	10/27/08 21:14	RL	EPA 300/SW846 9056A

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14346

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ______ (SIGN)
SAMPLERS CASTRO / MURPHY (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
A. 40-ml VOA Vial B. Glass Liter C. Plastic 500-ml D. Plastic Liter E. Brass Tube [✓ F.] Other 250ml Poly	[✓ A.] Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment F. Oil G. Waste H. Blank/Spike I. Other ______	[✓ 1.] Standard 10 DAYS. 2. 48 Hour 3. 24 Hour 4. Other ______

ANALYTICAL LAB Accutest

LABORATORY USE ONLY
LAB PROJECT NO. C2791

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	Field Filtered (check)	ANALYSIS REQUESTED: Bromide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	10/09/08		SOURCE -1				F	A	1				X	1		✓				
2			MW1 -2				F	A	1				X	1		✓				
3			MW2 -3				F	A	1				X	1		✓				
4			MW3 -4				F	A	1				X	1		✓				
5			MW4 -5				F	A	1				X	1		✓				
6			~~L5 COMP~~				F	A	1				X	1		✓				
7	10/21/08		L10 COMP -6				F	A	1				X	1						
8																				
9																				
10																				
11																				
12			6x250mL polys	N/P																
13																				
14			Cooler Temperature :	2.9°C																
15																				
16																				

NOTES/MISCELLANEOUS
<100mL sample volume for L10 comp. (EK) 10/27/08

Field/Container Temp. 4°C

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Thomas Murphy	X	10/27/08	12:41
X Pete Austin			

Container Sealed with Custody Seal: Yes ☑ No ☐

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
DROP OFF	cooler		Thomas Murphy	11/25/08	1215			

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV.6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

ACCUTEST Laboratories

Sample Receiving Checklist

Job # C2791

Review Chain of Custody: The Chain of Custody is to be completely and legibly filed out by Client.

☐ Are these regulatory (NPDES) samples? Yes / [✓ No] circle one ☐ Is pH requested? Yes / [✓ No] circle one
☐ Was Client informed that the hold time is 15mins Yes / No circle one If yes, did they consent to continue? ______
☐ Are sample within one-half hold-time? Yes / No circle one If no, was the lab informed? ______
☑ Report to info is complete and legible, including:
 ☑ Type of Deliverable needed ☑ name ☑ address ☑ phone ☑ email ON File
☐ Bill to info is complete and legible, including: ☐ PO# ☐ Credit card ☐ contact ☐ address ☐ phone ☐ email
☑ Contact and/or Project Mgr identified, including: ☑ phone ☑ email
☑ Project name / number ☐ Special requirements? [✓ Yes] / No circle one
☑ Sample IDs / date & ~~time~~ of collection provided? [✓ Yes] / No circle one no time of Sampling listed
☑ Matrix listed and correct? [✓ Yes] / No circle one
☑ Analyses listed are those we do or client has authorized a subcontract? [✓ Yes] / No circle one
☑ Chain is signed / dated by both client and sample custodian? [✓ Yes] / No circle one
☑ TAT requested available? Approved by ELK

Review Coolers:

☑ Samples / Coolers are at 0-6°C? 2.9°C If sampled within 4hrs, then "on ice" is acceptable.
If a cooler is outside the 0-6°C range; note below the bottles in that cooler below.
Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)
Shipment Method: walk in
Custody Seals Present: Yes / No circle one Un-broken: Yes / No circle one

Review of Sample Bottles: If you answer no, explain below

☑ IDs / bottle number / Date / ~~Time~~ of bottle labels match CoC?
☑ Sample bottle intact? [✓ Yes] / No circle one
☑ Proper containers and volumes? [✓ Yes] / No circle one
☐ Proper preservatives? Check pH on preserved samples except 1664, 625, 8270, and VOAs and list below. N/A
☐ VOAs received without headspace? Yes / No circle one N/A

Lab#	Client Sample ID	pH Check:	Other Comments / Issues
			6x 250mL polys. N/P

☐ Client informed of irregularities at receiving ☐ Project Mgr needs to contact Client for Issues

Comments: <100mL Sample Volume for C2791-006 (L10 Comp)

C2791: Chain of Custody
Page 2 of 2

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C2791
Account: LTCAMV - Locus Technologies
Project: Recycled Water Study - San Jose, CA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP294/GN667	0.20	<0.20	mg/l	5	5.04	100.8	90-110%
Nitrogen, Nitrate	GP294/GN667	0.10	<0.10	mg/l	2.26	2.27	100.4	90-110%

Associated Samples:
Batch GP294: C2791-1, C2791-2, C2791-3, C2791-4, C2791-5, C2791-6
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C2791
Account: LTCAMV - Locus Technologies
Project: Recycled Water Study - San Jose, CA

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Bromide	GP294/GN667	mg/l	5	5.07	0.6	25%
Nitrogen, Nitrate	GP294/GN667	mg/l	2.26	2.27	0.0	25%

Associated Samples:
Batch GP294: C2791-1, C2791-2, C2791-3, C2791-4, C2791-5, C2791-6
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C2791
Account: LTCAMV - Locus Technologies
Project: Recycled Water Study - San Jose, CA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP294/GN667	C2794-1	mg/l	0.20	4	3.8	90.0	80-120%
Nitrogen, Nitrate	GP294/GN667	C2794-1	mg/l	1.0	4	4.4	85.0	80-120%

Associated Samples:
Batch GP294: C2791-1, C2791-2, C2791-3, C2791-4, C2791-5, C2791-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C2791
Account: LTCAMV - Locus Technologies
Project: Recycled Water Study - San Jose, CA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP294/GN667	C2794-1	mg/l	0.20	4	3.8	0.0	
Nitrogen, Nitrate	GP294/GN667	C2794-1	mg/l	1.0	4	4.4	0.0	

Associated Samples:
Batch GP294: C2791-1, C2791-2, C2791-3, C2791-4, C2791-5, C2791-6
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits

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2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 207210
ANALYTICAL REPORT

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

Project : 27011-07-4200
Location : Recycled Water Study
Level : II

Sample ID	Lab ID
MW1	207210-001
MW2	207210-002
MW3	207210-003
MW4	207210-004
SOURCE	207210-005
L5 COMP	207210-006
L10 COMP	207210-007

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Anna
Project Manager

Date: 12/01/2008

Signature:
Senior Program Manager

Date: 12/01/2008

NELAP # 01107CA

CASE NARRATIVE

Laboratory number:	**207210**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**10/27/08**
Samples Received:	**10/27/08**

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 10/27/08. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
Responses exceeding the instrument's linear range were observed for trichloroethene in the MS/MSD for batch 144378; affected data was qualified with "b". No other analytical problems were encountered.

Metals (EPA 6010B):
No analytical problems were encountered.

Ion Chromatography (EPA 300.0):
No analytical problems were encountered.

Perchlorate by Ion Chromatography (EPA 314.0):
No analytical problems were encountered.

Total Cyanide (SM4500CN-E):
No analytical problems were encountered.

Alkalinity (SM2320B):
No analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):
No analytical problems were encountered.

Total Phosphorous (SM4500P-E):
No analytical problems were encountered.

Total Organic Carbon (TOC) (SM5310C):
No analytical problems were encountered.

Dissolved Organic Carbon (DOC) (SM5310C):
No analytical problems were encountered.

Surfactants (MBAS) (SM5540C):
No analytical problems were encountered.

EPA 552 (EPA 552):
Weck Laboratories, Inc. in Hacienda Heights, CA performed the analysis.

CASE NARRATIVE

Laboratory number:	**207210**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**10/27/08**
Samples Received:	**10/27/08**

EPA 552 (EPA 552):

Please see the Weck Laboratories, Inc. case narrative.

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14337

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER
(SIGN)

SAMPLERS CASTRO
(PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
(A) 40-ml VOA Vial (B) Glass Liter (C) Plastic 500-ml (D) Plastic Liter (E) ~~Brass Tube~~ 250ml poly (F) Other 250ml GLASS	(A) Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment F. Oil G. Waste H. Blank/Spike I. Other	(1) Standard 2. 48 Hour 3. 24 Hour 4. Other

ANALYTICAL LAB CURTIS & TOMPKINS

LABORATORY USE ONLY
LAB PROJECT NO. 207210

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	8010	HAAS	6010 METALS *	SEE NOTE **	TOC	DOC	TDS	TOTAL PHOSPHATE	SURFACTANTS	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1	10/27/08	1210	MW1	19.8	865	6.75	A	A			3			X									1		✓	✓			
	2	↓	1210	MW1	↓	↓	↓	B	A	1						X								1		✓				
	3		1210	MW1				C	A		1						X							1		✓				
	4		1210	MW1				D	A	1								X						1		✓				
	5		1210	MW1				E	A	1											X			1		✓				
	6		1210	MW1				F	A				2						X	X				1		✓				
2	7		1105	MW2	19.4	719	6.80	A	A			3			X									1		✓	✓			
	8		1105	MW2	↓	↓	↓	B	A	1						X								1		✓				
	9		1105	MW2				C	A		1						X							1		✓				
	10		1105	MW2				D	A	1								X						1		✓				
	11		1105	MW2				E	A	1											X			1		✓				
	12		1105	MW2				F	A				2						X	X				1		✓				
(1)	13		1210	MW1	19.8	865	6.75	E	A				1									X		1		✓				
	14		1210	MW1	19.8	865	6.75	D	A	1													X	1		✓				
(2)	15		1105	MW2	19.4	719	6.80	E	A				1									X		1		✓				
	16	↓	1105	MW2	19.4	719	6.80	D	A	1													X	1		✓				

NOTES / MISCELLANEOUS

* BORON/CALCIUM/MAGNESIUM/SODIUM/POTASSIUM

** ALKALINITY/SULFATE/NITRITE/NITRATE/CHLORIDE

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	14339 14342 14343 14344 14348		10/27/08	1500		10/27/08	1500

Send Lab Results to (Name): WES HAWTHORNE CC NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14342

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

RECORDER T. M (SIGN)

SAMPLERS CASTRO (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- (A) 40-ml VOA Vial
- (B) Glass Liter
- (C) Plastic 500-ml
- (D) Plastic Liter
- (E) ~~Brass Tube~~ 250 ml
- (F) Other 250ml Glass

SAMPLE DESCRIPTION CODES
- (A) Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other ______

TAT CODES
- (1.) Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB CURTIS & TOMPKINS

LABORATORY USE ONLY

LAB PROJECT NO. 207210

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO3	HCL	H2SO4	Field Filtered (check)	8010	HAAS	6010 METALS *	SEE NOTE **	TOC	DOC	TDS	TOTAL PHOSPHATE	SURFACTANTS	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
	1	10/27/08	855	MW3	17.2	905	6.79	A	A			3			X									1		✓	✓			
	2		855					B	A	1						X								1		✓				
	3		855					C	A		1						X							1		✓				
3	4		855					D	A	1								X						1		✓				
	5		855					E	A	1											X			1		✓				
	6		855	↓	↓	↓	↓	F	A				2						X	X				1		✓				
	7		1005	MW4	18.3	949	6.84	A	A			3			X									1		✓	✓			
	8		1005					B	A	1						X								1		✓				
	9		1005					C	A		1						X							1		✓				
4	10		1005					D	A	1								X						1		✓				
	11		1005					E	A	1											X			1		✓				
	12		1005	↓	↓	↓	↓	F	A				2						X	X				1		✓				
(3)	13		855	MW3	17.2	905	6.79	E	A				1									X		1		✓				
	14		855	MW3	17.2	905	6.79	D	A	1													X	1		✓				
(4)	15		1005	MW4	18.3	949	6.84	E	A				1									X		1		✓				
	16	↓	1005	MW4	18.3	949	6.84	D	A	1													X	1		✓				

NOTES / MISCELLANEOUS

* BORON / CALCIUM / MAGNESIUM / SODIUM / POTASIUM

** ALKALINITY / SULFATE / NITRITE / NITRATE / CHLORIDE

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature) T. M	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	14337 14339 14343 14344 14348		10/27/08	1500		10/27/08	1500

Send Lab Results to (Name): WES HAWTHORNE CC NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739

☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101

☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ______ TEL ______ FAX ______

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14343

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07 4200

RECORDER ~~tu~~ T. Murphy (SIGN)

SAMPLERS T. Murphy (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. ~~Brass Tube~~ 250ml poly
F. Other 250ml glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 207210

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See note **	6010 metals *	TOC	TDS	DOC	8010	HAAD	Total phosphate	Surfactants	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	10/27/08	1145	SOURCE	21.9	1427	6.75	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	F	A				1						X					1		✓				
6	↓	↓	↓	↓	↓	↓	A	A			3								X				1		✓	✓			
7	↓	↓	↓	↓	↓	↓	B	A	1											X			1		✓				
8	↓	↓	↓	↓	↓	↓	E	A				1									X		1		✓				
9	↓	↓	↓	↓	↓	↓	D	A	1													X	1		✓				
10	↓	↓																											
11																													
12																													
13																													
14																													
15																													
16																													

5

NOTES / MISCELLANEOUS
* BORON, CALCIUM, MAGNESIUM, SODIUM, POTASSIUM
** ALKALINITY, SULFATE, NITRITE, NITRATE, CHLORIDE

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
courier	cooler	14337 14339 14342 14344 14348	Thomas Murphy	10/27/08	1500		10/27/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) ✓ Verbals Requested: Yes ☑ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14344

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER T. Murphy (SIGN)
SAMPLERS T. MURPHY (PRINT)
T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
[✓ C. Plastic 500-ml]
D. Plastic Liter
E. Brass Tube
[✓ F.] ~~Other~~ 250 mL poly

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 207210

(5)

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED															
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	NaOH	Field Filtered (check)	Perchlorate	Cyanide								TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	10/27/08	1145	SOURCE	21.9	1427	6.75	F	A	1					X									1		✓				
2	10/27/08	1145	SOURCE				C	A				1			X								1		✓				
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
courier	cooler	14337, 14339, 14342, 14343, 14348	Thomas Murphy	10/27/08	1500		10/27/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ________________________ TEL __________ FAX __________

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14339

PROJECT NAME Recycled Water study
PROJECT NUMBER 27011-07-4200
RECORDER T. Murphy (SIGN)

SAMPLERS ~~T.~~ MURPHY (PRINT)
T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 mL poly
[✓ F.] Other 250 mL glass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 207210

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO3	HCL	H2SO4	Field Filtered (check)	ANALYSIS REQUESTED: See note *	6010 metals *	TOC	TDS	DOC	3010	HAA5	TOTAL PHOSPHATE		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
	1			~~L2-5~~ L5 COMP	16.3	2434	6.43	D	A	1					X									1		✓				
	2							C	A		1					X								1		✓				
	3							F	A				1				X							1		✓				
6	4							E	A	1								X						1		✓				
	5							F	A				1						X					1		✓				
	6							A	A			2								X				1		✓	✓			
	7							B	A	1											X			1		✓				
	8			~~L2-10~~ L10 COMP	16.7	1682	6.55	D	A	1					X									1		✓				
	9							C	A		1					X								1		✓				
	10							F	A				1				X							1		✓				
7	11							E	A	1								X						1		✓				
	12							F	A				1						X					1		✓				
	13							A	A			2								X				1		✓	✓			
	14							B	A	1											X			1		✓				
(6)	15			L5 COMP	16.3	2434	6.43	E	A				1									X		1		✓				
(7)	16			L10 COMP	16.7	1682	6.55	E	A				1									X		1		✓				

NOTES / MISCELLANEOUS
* boron, calcium, magnesium, sodium, potassium
* alkalinity, sulfate, nitrite, nitrate, chloride

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	cooler	14337 14342 14343 14344 14348	Thomas Murphy	10/27/08	1500		10/27/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______________________ TEL __________ FAX __________

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14348

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER T. Murphy (SIGN)
SAMPLERS CASTRO/MURPHY (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D.] Plastic Liter
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 207210

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO3	HCL	Field Filtered (check)	ANALYSIS REQUESTED SURFACTANTS	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
(6) 1	10/27/08	—	L5COMP	16.3	2434	6.42	D	A	1				X	1		✓				
(7) 2		—	L10 COMP	16.7	1682	6.53	D	A	1				X	1		✓				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	14337, 14339, 14342 14343 14344	Thomas Murphy	10/27/08	1500	Ruby	10/27/08	1500

Send Lab Results to (Name): WES HAWTHORNE cc NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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COOLER RECEIPT CHECKLIST

ct Curtis & Tompkins, Ltd

Login # 207210 Date Received 10/27/08 Number of coolers 5
Client LOCUS Project Recycled Water Study

Date Opened 10/27 By (print) K Wellbrock (sign) K Wellbrock
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc)? .... YES [✓ NO]
   Shipping info

2A. Were custody seals present? .... ☒YES (circle) [✓ on cooler] on samples ☐ NO
   How many 1 each Name Tom Murphy Date 10/27/08 1500

2B. Were custody seals intact upon arrival? .... [✓ YES] NO N/A

3. Were custody papers dry and intact when received? .... [✓ YES] NO

4. Were custody papers filled out properly (ink, signed, etc)? .... [✓ YES] NO

5. Is the project identifiable from custody papers? (If so fill out top of form) .... [✓ YES] NO

6. Indicate the packing in cooler: (if other, describe)

☒ Bubble Wrap
☐ Cloth material
☐ Foam blocks
☐ Cardboard
☒ Bags
☐ Styrofoam
☐ None
☐ Paper towels

7. Temperature documentation:

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C)

☒ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? .... YES [✓ NO]
   If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? ....

10. Are samples in the appropriate containers for indicated tests? .... [✓ YES] NO

11. Are sample labels present, in good condition and complete? .... [✓ YES] NO

12. Do the sample labels agree with custody papers? .... [✓ YES] NO

13. Was sufficient amount of sample sent for tests requested? .... [✓ YES] NO

14. Are the samples appropriately preserved? .... [✓ YES] NO

15. Are bubbles > 6mm absent in VOA samples? .... [✓ YES] NO N/A

16. Was the client contacted concerning this sample delivery? .... YES NO
   If YES, Who was called? By Date:

COMMENTS

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1

Rev. 6 Number 1 of 3
Effective: 23 July 2008
F:\qc\forms\checklists\Cooler Receipt Checklist_rv6.doc

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW1	Batch#:	144356
Lab ID:	207210-001	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/01/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	0.6	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	1.9	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW2	Batch#:	144356
Lab ID:	207210-002	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/01/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	0.7	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	2.0	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	111	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW3	Batch#:	144378
Lab ID:	207210-003	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/03/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	1.0	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	2.6	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	80-120
Toluene-d8	93	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW4	Batch#:	144378
Lab ID:	207210-004	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/03/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	0.9	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	2.6	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	144378
Lab ID:	207210-005	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/03/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	7.8	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	8.5	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	5.3	0.5
Chlorobenzene	ND	0.5
Bromoform	1.5	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L5 COMP	Batch#:	144435
Lab ID:	207210-006	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/04/08
Diln Fac:	83.33		

Analyte	Result	RL
Chloromethane	ND	83
Vinyl Chloride	ND	42
Bromomethane	ND	83
Chloroethane	ND	83
Trichlorofluoromethane	ND	83
Freon 113	ND	420
1,1-Dichloroethene	ND	42
Methylene Chloride	ND	420
trans-1,2-Dichloroethene	ND	42
1,1-Dichloroethane	ND	42
cis-1,2-Dichloroethene	ND	42
Chloroform	ND	42
1,1,1-Trichloroethane	ND	42
Carbon Tetrachloride	ND	42
1,2-Dichloroethane	ND	42
Trichloroethene	ND	42
1,2-Dichloropropane	ND	42
Bromodichloromethane	ND	42
2-Chloroethylvinylether	ND	83
cis-1,3-Dichloropropene	ND	42
trans-1,3-Dichloropropene	ND	42
1,1,2-Trichloroethane	ND	42
Tetrachloroethene	ND	42
Dibromochloromethane	ND	42
Chlorobenzene	ND	42
Bromoform	ND	42
1,1,2,2-Tetrachloroethane	ND	42
1,3-Dichlorobenzene	ND	42
1,4-Dichlorobenzene	ND	42
1,2-Dichlorobenzene	ND	42

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	115	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	111	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L10 COMP	Batch#:	144378
Lab ID:	207210-007	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/03/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	110	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468246	Batch#:	144356
Matrix:	Water	Analyzed:	11/01/08
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468258	Batch#:	144356
Matrix:	Water	Analyzed:	11/01/08
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	112	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	107	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468329	Batch#:	144378
Matrix:	Water	Analyzed:	11/03/08
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	107	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468330	Batch#:	144378
Matrix:	Water	Analyzed:	11/03/08
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468613	Batch#:	144435
Matrix:	Water	Analyzed:	11/04/08
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	113	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	111	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468614	Batch#:	144435
Matrix:	Water	Analyzed:	11/04/08
Units:	ug/L		

Analyte	**Result**	**RL**
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	110	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC468245	Batch#:	144356
Matrix:	Water	Analyzed:	11/01/08
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	27.44	110	80-120
Trichloroethene	25.00	25.78	103	80-120
Chlorobenzene	25.00	25.20	101	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	113	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	113	80-120

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	144356
MSS Lab ID:	207279-002	Sampled:	10/28/08
Matrix:	Water	Received:	10/29/08
Units:	ug/L	Analyzed:	11/01/08
Diln Fac:	1.000		

Type: MS   Lab ID: QC468256

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1391	25.00	27.11	108	40-150
Trichloroethene	<0.1252	25.00	25.85	103	40-150
Chlorobenzene	3.643	25.00	28.76	100	40-150

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	107	80-120

Type: MSD   Lab ID: QC468257

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	28.35	113	40-150	5	35
Trichloroethene	25.00	25.51	102	40-150	1	35
Chlorobenzene	25.00	27.57	96	40-150	4	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	109	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC468328	Batch#:	144378
Matrix:	Water	Analyzed:	11/03/08
Units:	ug/L		

Analyte	**Spiked**	**Result**	**%REC**	**Limits**
1,1-Dichloroethene	25.00	26.86	107	80-120
Trichloroethene	25.00	25.71	103	80-120
Chlorobenzene	25.00	24.87	99	80-120

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	105	80-120

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	144378
MSS Lab ID:	207209-006	Sampled:	10/24/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/03/08
Diln Fac:	5.000		

Type: MS

Lab ID: QC468333

Analyte	MSS Result	Spiked	Result		%REC	Limits
1,1-Dichloroethene	0.8470	125.0	139.3		111	40-150
Trichloroethene	381.6	125.0	557.9	>LR b	141	40-150
Chlorobenzene	<0.5000	125.0	126.1		101	40-150

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	116	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	108	80-120

Type: MSD

Lab ID: QC468334

Analyte	Spiked	Result		%REC	Limits	RPD	Lim
1,1-Dichloroethene	125.0	129.0		102	40-150	8	35
Trichloroethene	125.0	517.7	>LR b	109	40-150	NC	35
Chlorobenzene	125.0	120.5		96	40-150	5	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	112	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	109	80-120

b= See narrative
NC= Not Calculated
>LR= Response exceeds instrument's linear range
RPD= Relative Percent Difference

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC468612	Batch#:	144435
Matrix:	Water	Analyzed:	11/04/08
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	27.41	110	80-120
Trichloroethene	25.00	24.69	99	80-120
Chlorobenzene	25.00	23.82	95	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	112	80-120

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	144435
MSS Lab ID:	207129-003	Sampled:	10/22/08
Matrix:	Water	Received:	10/23/08
Units:	ug/L	Analyzed:	11/04/08
Diln Fac:	1.000		

Type: MS

Lab ID: QC468622

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	3.844	25.00	29.88	104	40-150
Trichloroethene	7.181	25.00	33.16	104	40-150
Chlorobenzene	<0.1000	25.00	25.45	102	40-150

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	105	80-120

Type: MSD

Lab ID: QC468623

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	26.30	90	40-150	13	35
Trichloroethene	25.00	30.53	93	40-150	8	35
Chlorobenzene	25.00	23.09	92	40-150	10	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-120

RPD= Relative Percent Difference

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW1	Batch#:	144356
Lab ID:	207210-001	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/01/08
Diln Fac:	1.000		

Analyte	Result	RL
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	108	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW2	Batch#:	144356
Lab ID:	207210-002	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/01/08
Diln Fac:	1.000		

Analyte	Result	RL
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	114	80-137
Toluene-d8	103	80-120
Bromofluorobenzene	111	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW3	Batch#:	144378
Lab ID:	207210-003	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/03/08
Diln Fac:	1.000		

Analyte	Result	RL
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	93	80-120
Bromofluorobenzene	109	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW4	Batch#:	144378
Lab ID:	207210-004	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/03/08
Diln Fac:	1.000		

Analyte	Result	RL
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	106	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	144378
Lab ID:	207210-005	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/03/08
Diln Fac:	1.000		

Analyte	Result	RL
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	108	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L5 COMP	Batch#:	144435
Lab ID:	207210-006	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/04/08
Diln Fac:	83.33		

Analyte	Result	RL
m,p-Xylenes	ND	42
o-Xylene	ND	42

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	115	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	111	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L10 COMP	Batch#:	144378
Lab ID:	207210-007	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/03/08
Diln Fac:	1.000		

Analyte	**Result**	**RL**
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	110	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	110	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC468245	Batch#:	144356
Matrix:	Water	Analyzed:	11/01/08
Units:	ug/L		

Analyte	**Spiked**	**Result**	**%REC**	**Limits**
m,p-Xylenes	50.00	50.40	101	80-126
o-Xylene	25.00	25.21	101	80-120

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	113	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	113	80-122

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468246	Batch#:	144356
Matrix:	Water	Analyzed:	11/01/08
Units:	ug/L		

Analyte	Result	RL
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	144356
MSS Lab ID:	207279-002	Sampled:	10/28/08
Matrix:	Water	Received:	10/29/08
Units:	ug/L	Analyzed:	11/01/08
Diln Fac:	1.000		

Type: MS Lab ID: QC468256

Analyte	MSS Result	Spiked	Result	%REC	Limits
m,p-Xylenes	0.7608	50.00	50.61	100	80-121
o-Xylene	0.4850	25.00	26.04	102	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	107	80-122

Type: MSD Lab ID: QC468257

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
m,p-Xylenes	50.00	48.42	95	80-121	4	20
o-Xylene	25.00	24.62	97	80-120	6	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	99	80-120
Bromofluorobenzene	109	80-122

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468258	Batch#:	144356
Matrix:	Water	Analyzed:	11/01/08
Units:	ug/L		

Analyte	Result	RL
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	112	80-137
Toluene-d8	102	80-120
Bromofluorobenzene	107	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC468328	Batch#:	144378
Matrix:	Water	Analyzed:	11/03/08
Units:	ug/L		

Analyte	**Spiked**	**Result**	**%REC**	**Limits**
m,p-Xylenes	50.00	52.24	104	80-126
o-Xylene	25.00	25.53	102	80-120

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	109	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	105	80-122

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468329	Batch#:	144378
Matrix:	Water	Analyzed:	11/03/08
Units:	ug/L		

Analyte	Result	RL
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	107	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468330	Batch#:	144378
Matrix:	Water	Analyzed:	11/03/08
Units:	ug/L		

Analyte	Result	RL
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-137
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	144378
MSS Lab ID:	207209-006	Sampled:	10/24/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	11/03/08
Diln Fac:	5.000		

Type: MS Lab ID: QC468333

Analyte	MSS Result	Spiked	Result	%REC	Limits
m,p-Xylenes	<0.7907	250.0	256.6	103	80-121
o-Xylene	<0.5000	125.0	129.6	104	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	116	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	108	80-122

Type: MSD Lab ID: QC468334

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
m,p-Xylenes	250.0	235.7	94	80-121	8	20
o-Xylene	125.0	118.1	94	80-120	9	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	112	80-137
Toluene-d8	97	80-120
Bromofluorobenzene	109	80-122

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC468612	Batch#:	144435
Matrix:	Water	Analyzed:	11/04/08
Units:	ug/L		

Analyte	**Spiked**	**Result**	**%REC**	**Limits**
m,p-Xylenes	50.00	49.77	100	80-126
o-Xylene	25.00	23.35	93	80-120

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	110	80-137
Toluene-d8	98	80-120
Bromofluorobenzene	112	80-122

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468613	Batch#:	144435
Matrix:	Water	Analyzed:	11/04/08
Units:	ug/L		

Analyte	Result	RL
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	113	80-137
Toluene-d8	95	80-120
Bromofluorobenzene	111	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC468614	Batch#:	144435
Matrix:	Water	Analyzed:	11/04/08
Units:	ug/L		

Analyte	**Result**	**RL**
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	111	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	110	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	144435
MSS Lab ID:	207129-003	Sampled:	10/22/08
Matrix:	Water	Received:	10/23/08
Units:	ug/L	Analyzed:	11/04/08
Diln Fac:	1.000		

Type: MS   Lab ID: QC468622

Analyte	MSS Result	Spiked	Result	%REC	Limits
m,p-Xylenes	<0.1581	50.00	50.85	102	80-121
o-Xylene	<0.1000	25.00	24.81	99	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-137
Toluene-d8	96	80-120
Bromofluorobenzene	105	80-122

Type: MSD   Lab ID: QC468623

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
m,p-Xylenes	50.00	46.50	93	80-121	9	20
o-Xylene	25.00	22.28	89	80-120	11	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-137
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-122

RPD= Relative Percent Difference

Boron

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Prepared:	10/29/08
Diln Fac:	1.000	Analyzed:	10/30/08
Batch#:	144225		

Field ID	Type	Lab ID	Result	RL
MW1	SAMPLE	207210-001	200	100
MW2	SAMPLE	207210-002	160	100
MW3	SAMPLE	207210-003	200	100
MW4	SAMPLE	207210-004	230	100
SOURCE	SAMPLE	207210-005	460	100
L5 COMP	SAMPLE	207210-006	270	100
L10 COMP	SAMPLE	207210-007	330	100
	BLANK	QC467675	ND	100

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Boron

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	144225
MSS Lab ID:	207169-001	Sampled:	10/24/08
Matrix:	Water	Received:	10/24/08
Units:	ug/L	Prepared:	10/29/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
BS	QC467676		1,000	978.1	98	80-120			11/07/08
BSD	QC467677		1,000	966.0	97	80-120	1	20	11/07/08
MS	QC467678	1,185	1,000	2,285	110	79-121			10/30/08
MSD	QC467679		1,000	2,270	109	79-121	1	20	10/30/08

RPD= Relative Percent Difference

Calcium

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Prepared:	10/29/08
Batch#:	144225	Analyzed:	10/30/08

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW1	SAMPLE	207210-001	86,000	500	1.000
MW2	SAMPLE	207210-002	74,000	500	1.000
MW3	SAMPLE	207210-003	92,000	6,700	20.00
MW4	SAMPLE	207210-004	110,000	6,700	20.00
SOURCE	SAMPLE	207210-005	64,000	500	1.000
L5 COMP	SAMPLE	207210-006	270,000	6,700	20.00
L10 COMP	SAMPLE	207210-007	170,000	6,700	20.00
	BLANK	QC467675	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Calcium

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	144225
MSS Lab ID:	207169-001	Sampled:	10/24/08
Matrix:	Water	Received:	10/24/08
Units:	ug/L	Prepared:	10/29/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
BS	QC467676		20,000	19,530	98	80-120			11/07/08
BSD	QC467677		20,000	17,970	90	80-120	8	20	11/07/08
MS	QC467678	26,820	20,000	43,950	86	63-130			10/30/08
MSD	QC467679		20,000	47,780	105	63-130	8	20	10/30/08

RPD= Relative Percent Difference

Potassium

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Batch#:	144225
Matrix:	Water	Sampled:	10/27/08
Units:	ug/L	Received:	10/27/08
Diln Fac:	1.000	Prepared:	10/29/08

Field ID	Type	Lab ID	Result	RL	Analyzed
MW1	SAMPLE	207210-001	730	500	10/30/08
MW2	SAMPLE	207210-002	1,100	500	10/30/08
MW3	SAMPLE	207210-003	ND	500	10/30/08
MW4	SAMPLE	207210-004	ND	500	10/30/08
SOURCE	SAMPLE	207210-005	19,000	500	10/30/08
L5 COMP	SAMPLE	207210-006	9,300	500	10/30/08
L10 COMP	SAMPLE	207210-007	3,600	500	10/30/08
	BLANK	QC467675	ND	500	11/03/08

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Potassium

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Batch#:	144225
Field ID:	ZZZZZZZZZZ	Sampled:	10/24/08
MSS Lab ID:	207169-001	Received:	10/24/08
Matrix:	Water	Prepared:	10/29/08
Units:	ug/L		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac	Analyzed
BS	QC467676		10,000	9,323	93	80-120			1.000	11/07/08
BSD	QC467677		10,000	8,668	87	80-120	7	20	1.000	11/07/08
MS	QC467678	8,874	10,000	16,670	78	68-125			10.00	11/03/08
MSD	QC467679		10,000	18,120	92	68-125	8	20	10.00	11/03/08

RPD= Relative Percent Difference

Magnesium

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Prepared:	10/29/08
Batch#:	144225	Analyzed:	10/30/08

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW1	SAMPLE	207210-001	54,000	500	1.000
MW2	SAMPLE	207210-002	41,000	500	1.000
MW3	SAMPLE	207210-003	62,000	500	1.000
MW4	SAMPLE	207210-004	62,000	500	1.000
SOURCE	SAMPLE	207210-005	39,000	500	1.000
L5 COMP	SAMPLE	207210-006	100,000	500	1.000
L10 COMP	SAMPLE	207210-007	130,000	6,600	20.00
	BLANK	QC467675	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Magnesium

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	144225
MSS Lab ID:	207169-001	Sampled:	10/24/08
Matrix:	Water	Received:	10/24/08
Units:	ug/L	Prepared:	10/29/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Analyzed
BS	QC467676		20,000	19,420	97	80-120			11/07/08
BSD	QC467677		20,000	18,060	90	80-120	7	20	11/07/08
MS	QC467678	36,850	20,000	52,600	79	66-126			10/30/08
MSD	QC467679		20,000	57,000	101	66-126	8	20	10/30/08

RPD= Relative Percent Difference

Sodium

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Prepared:	10/29/08
Batch#:	144225	Analyzed:	10/30/08

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW1	SAMPLE	207210-001	44,000	500	1.000
MW2	SAMPLE	207210-002	34,000	500	1.000
MW3	SAMPLE	207210-003	46,000	500	1.000
MW4	SAMPLE	207210-004	48,000	500	1.000
SOURCE	SAMPLE	207210-005	210,000	10,000	20.00
L5 COMP	SAMPLE	207210-006	260,000	10,000	20.00
L10 COMP	SAMPLE	207210-007	87,000	10,000	20.00
	BLANK	QC467675	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Sodium

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Batch#:	144225
Field ID:	ZZZZZZZZZZ	Sampled:	10/24/08
MSS Lab ID:	207169-001	Received:	10/24/08
Matrix:	Water	Prepared:	10/29/08
Units:	ug/L	Analyzed:	11/07/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
BS	QC467676		20,000	19,350	97	80-120			1.000
BSD	QC467677		20,000	17,820	89	80-120	8	20	1.000
MS	QC467678	709,200	20,000	800,400	456 NM	60-131			10.00
MSD	QC467679		20,000	748,200	195 NM	60-131	7	20	10.00

NM= Not Meaningful: Sample concentration > 4X spike concentration

RPD= Relative Percent Difference

Chloride

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Analyte:	Chloride	Batch#:	144142
Matrix:	Water	Received:	10/27/08
Units:	mg/L		

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled	Analyzed
MW1	SAMPLE	207210-001	54	1.0	5.000	10/27/08 12:10	10/27/08 23:22
MW2	SAMPLE	207210-002	39	1.0	5.000	10/27/08 11:05	10/27/08 23:39
MW3	SAMPLE	207210-003	51	1.0	5.000	10/27/08 08:55	10/27/08 23:57
MW4	SAMPLE	207210-004	44	1.0	5.000	10/27/08 10:05	10/28/08 00:14
SOURCE	SAMPLE	207210-005	280	4.0	20.00	10/27/08 11:45	10/27/08 17:51
L5 COMP	SAMPLE	207210-006	87	1.0	5.000	10/27/08	10/27/08 20:45
L10 COMP	SAMPLE	207210-007	77	2.0	10.00	10/27/08	10/27/08 21:20
	BLANK	QC467326	ND	0.20	1.000		10/27/08 13:31

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Chloride

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Analyte:	Chloride	Units:	mg/L
Field ID:	L5 COMP	Batch#:	144142
MSS Lab ID:	207210-006	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac	Analyzed
BS	QC467327		4.000	4.086	102	80-120			1.000	10/27/08 13:48
BSD	QC467328		4.000	4.061	102	80-120	1	20	1.000	10/27/08 14:05
MS	QC467329	86.88	100.0	196.8	110	80-120			50.00	10/28/08 01:41
MSD	QC467330		100.0	197.2	110	80-120	0	20	50.00	10/28/08 01:58

RPD= Relative Percent Difference

Nitrate Nitrogen

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Analyte:	Nitrogen, Nitrate	Batch#:	144142
Matrix:	Water	Received:	10/27/08
Units:	mg/L		

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled	Analyzed
MW1	SAMPLE	207210-001	3.7	0.05	1.000	10/27/08 12:10	10/27/08 18:08
MW2	SAMPLE	207210-002	3.9	0.05	1.000	10/27/08 11:05	10/27/08 18:26
MW3	SAMPLE	207210-003	2.1	0.05	1.000	10/27/08 08:55	10/27/08 18:43
MW4	SAMPLE	207210-004	3.0	0.05	1.000	10/27/08 10:05	10/27/08 19:01
SOURCE	SAMPLE	207210-005	12	0.25	5.000	10/27/08 11:45	10/27/08 22:29
L5 COMP	SAMPLE	207210-006	ND	0.25	5.000	10/27/08	10/27/08 20:45
L10 COMP	SAMPLE	207210-007	1.8	0.05	1.000	10/27/08	10/27/08 21:37
	BLANK	QC467326	ND	0.05	1.000		10/27/08 13:31

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Nitrate Nitrogen

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Analyte:	Nitrogen, Nitrate	Units:	mg/L
Field ID:	L5 COMP	Batch#:	144142
MSS Lab ID:	207210-006	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac	Analyzed
BS	QC467327		1.000	0.9918	99	80-120			1.000	10/27/08 13:48
BSD	QC467328		1.000	1.022	102	80-120	3	20	1.000	10/27/08 14:05
MS	QC467329	<0.07223	25.00	26.26	105	80-120			50.00	10/28/08 01:41
MSD	QC467330		25.00	25.67	103	80-120	2	20	50.00	10/28/08 01:58

RPD= Relative Percent Difference

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Nitrite Nitrogen

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Analyte:	Nitrogen, Nitrite	Batch#:	144142
Matrix:	Water	Received:	10/27/08
Units:	mg/L		

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled	Analyzed
MW1	SAMPLE	207210-001	ND	0.05	1.000	10/27/08 12:10	10/27/08 18:08
MW2	SAMPLE	207210-002	ND	0.05	1.000	10/27/08 11:05	10/27/08 18:26
MW3	SAMPLE	207210-003	ND	0.05	1.000	10/27/08 08:55	10/27/08 18:43
MW4	SAMPLE	207210-004	ND	0.05	1.000	10/27/08 10:05	10/27/08 19:01
SOURCE	SAMPLE	207210-005	0.85	0.05	1.000	10/27/08 11:45	10/27/08 22:47
L5 COMP	SAMPLE	207210-006	ND	0.25	5.000	10/27/08	10/27/08 20:45
L10 COMP	SAMPLE	207210-007	ND	0.05	1.000	10/27/08	10/27/08 21:37
	BLANK	QC467326	ND	0.05	1.000		10/27/08 13:31

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Nitrite Nitrogen

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Analyte:	Nitrogen, Nitrite	Units:	mg/L
Field ID:	L5 COMP	Batch#:	144142
MSS Lab ID:	207210-006	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac	Analyzed
BS	QC467327		1.000	1.031	103	80-120			1.000	10/27/08 13:48
BSD	QC467328		1.000	1.012	101	80-120	2	20	1.000	10/27/08 14:05
MS	QC467329	<0.05765	25.00	26.75	107	80-120			50.00	10/28/08 01:41
MSD	QC467330		25.00	27.08	108	80-120	1	20	50.00	10/28/08 01:58

RPD= Relative Percent Difference

Sulfate

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Analyte:	Sulfate	Batch#:	144142
Matrix:	Water	Received:	10/27/08
Units:	mg/L		

Field ID	Type	Lab ID	Result	RL	Diln Fac	Sampled	Analyzed
MW1	SAMPLE	207210-001	71	2.5	5.000	10/27/08 12:10	10/27/08 23:22
MW2	SAMPLE	207210-002	48	0.50	1.000	10/27/08 11:05	10/27/08 18:26
MW3	SAMPLE	207210-003	56	2.5	5.000	10/27/08 08:55	10/27/08 23:57
MW4	SAMPLE	207210-004	66	2.5	5.000	10/27/08 10:05	10/28/08 00:14
SOURCE	SAMPLE	207210-005	110	2.5	5.000	10/27/08 11:45	10/27/08 22:29
L5 COMP	SAMPLE	207210-006	980	25	50.00	10/27/08	10/27/08 17:16
L10 COMP	SAMPLE	207210-007	320	5.0	10.00	10/27/08	10/27/08 21:20
	BLANK	QC467326	ND	0.50	1.000		10/27/08 13:31

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Sulfate

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Analyte:	Sulfate	Units:	mg/L
Field ID:	L5 COMP	Batch#:	144142
MSS Lab ID:	207210-006	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac	Analyzed
BS	QC467327		10.00	9.974	100	80-120			1.000	10/27/08 13:48
BSD	QC467328		10.00	9.966	100	80-120	0	20	1.000	10/27/08 14:05
MS	QC467329	982.8	250.0	1,251	107	80-120			50.00	10/28/08 01:41
MSD	QC467330		250.0	1,253	108	80-120	0	20	50.00	10/28/08 01:58

RPD= Relative Percent Difference

Perchlorate

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 314.0
Analyte:	Perchlorate	Batch#:	144184
Field ID:	SOURCE	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	ug/L	Analyzed:	10/28/08
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	207210-005	ND	4.0
BLANK	QC467516	ND	4.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Perchlorate

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 314.0
Analyte:	Perchlorate	Batch#:	144184
Field ID:	ZZZZZZZZZZ	Sampled:	10/23/08
MSS Lab ID:	207149-005	Received:	10/24/08
Units:	ug/L	Analyzed:	10/28/08

Type	Lab ID	Matrix	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
BS	QC467517	Water		20.00	17.73	89	85-115			1.000
BSD	QC467518	Water		20.00	17.92	90	85-115	1	15	1.000
MS	QC467528	WET DI Leachate	<0.6443	20.40	20.02	98	80-120			1.020
MSD	QC467529	WET DI Leachate		20.40	17.79	87	80-120	12	15	1.020

RPD= Relative Percent Difference

Total Cyanide

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	144149
Field ID:	SOURCE	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	mg/L	Analyzed:	10/28/08
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	207210-005	0.02	0.01
BLANK	QC467361	ND	0.01

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Cyanide

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	144149
MSS Lab ID:	207157-002	Sampled:	10/22/08
Matrix:	Water	Received:	10/24/08
Units:	mg/L	Analyzed:	10/28/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC467362	<0.01000	0.2000	0.1709	85	67-124		
MSD	QC467363		0.2000	0.1717	86	67-124	0	20
LCS	QC467364		0.2000	0.1898	95	80-124		

RPD= Relative Percent Difference

Alkalinity

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	10/27/08
Units:	mg/L	Received:	10/27/08
Batch#:	144181	Analyzed:	10/28/08

Field ID: MW1
Type: SAMPLE
Lab ID: 207210-001
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	320	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	320	6.7

Field ID: MW2
Type: SAMPLE
Lab ID: 207210-002
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	300	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	300	6.7

Field ID: MW3
Type: SAMPLE
Lab ID: 207210-003
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	380	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	380	6.7

Field ID: MW4
Type: SAMPLE
Lab ID: 207210-004
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	430	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	430	6.7

Field ID: SOURCE
Type: SAMPLE
Lab ID: 207210-005
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	170	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	170	6.7

ND= Not Detected
RL= Reporting Limit

Alkalinity

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	10/27/08
Units:	mg/L	Received:	10/27/08
Batch#:	144181	Analyzed:	10/28/08

Field ID: L5 COMP
Type: SAMPLE
Lab ID: 207210-006
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	470	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	470	6.7

Field ID: L10 COMP
Type: SAMPLE
Lab ID: 207210-007
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	660	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	660	6.7

Type: BLANK
Diln Fac: 1.000
Lab ID: QC467500

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Alkalinity

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as $CaCO_3$	Units:	mg/L
Type:	LCS	Diln Fac:	4.000
Lab ID:	QC467501	Batch#:	144181
Matrix:	Water	Analyzed:	10/28/08

Spiked	Result	%REC	Limits
200.0	194.0	97	90-110

Batch QC Report

Alkalinity

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Diln Fac:	4.000
Field ID:	ZZZZZZZZZZ	Batch#:	144181
MSS Lab ID:	207003-001	Sampled:	10/20/08
Matrix:	Water	Received:	10/20/08
Units:	mg/L	Analyzed:	10/28/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC467502	7.900	200.0	197.6	95	80-120		
MSD	QC467503		200.0	199.2	96	80-120	1	25

RPD= Relative Percent Difference

Dissolved Organic Carbon (DOC)

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Batch#:	144161
Matrix:	Water	Sampled:	10/27/08
Units:	mg/L	Received:	10/27/08

Field ID	Type	Lab ID	Result	RL	Diln Fac	Analyzed
MW1	SAMPLE	207210-001	ND	1.0	1.000	10/28/08
MW2	SAMPLE	207210-002	ND	1.0	1.000	10/28/08
MW3	SAMPLE	207210-003	ND	1.0	1.000	10/28/08
MW4	SAMPLE	207210-004	ND	1.0	1.000	10/28/08
SOURCE	SAMPLE	207210-005	7.1	1.0	1.000	10/28/08
L5 COMP	SAMPLE	207210-006	78	4.0	8.000	10/29/08
L10 COMP	SAMPLE	207210-007	6.4	2.0	2.000	10/28/08
	BLANK	QC467401	ND	1.0	1.000	10/28/08

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Dissolved Organic Carbon (DOC)

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Diln Fac:	1.000
Field ID:	MW1	Batch#:	144161
MSS Lab ID:	207210-001	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	mg/L	Analyzed:	10/28/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC467402		10.00	10.40	104	90-110		
MS	QC467403	0.8912	2.000	2.929	102	80-121		
MSD	QC467404		2.000	2.965	104	80-121	1	20

RPD= Relative Percent Difference

Total Phosphorous

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Batch#:	144253
Matrix:	Water	Sampled:	10/27/08
Units:	mg/L	Received:	10/27/08
Diln Fac:	1.000	Analyzed:	10/30/08

Field ID	Type	Lab ID	Result	RL
MW1	SAMPLE	207210-001	0.034	0.030
MW2	SAMPLE	207210-002	0.39	0.030
MW3	SAMPLE	207210-003	0.072	0.030
MW4	SAMPLE	207210-004	0.036	0.030
SOURCE	SAMPLE	207210-005	0.28	0.030
L5 COMP	SAMPLE	207210-006	0.031	0.030
L10 COMP	SAMPLE	207210-007	0.047	0.030
	BLANK	QC467814	ND	0.030

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Phosphorous

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	144253
MSS Lab ID:	207155-003	Sampled:	10/23/08
Matrix:	Water	Received:	10/24/08
Units:	mg/L	Analyzed:	10/30/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC467815	0.2973	0.1980	0.4956	100	19-182		
MSD	QC467816		0.1980	0.4945	100	19-182	0	26
LCS	QC467817		0.1980	0.2094	106	72-134		

RPD= Relative Percent Difference

Total Dissolved Solids (TDS)

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	mg/L	Prepared:	10/29/08
Batch#:	144237	Analyzed:	10/30/08

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW1	SAMPLE	207210-001	550	11	1.111
MW2	SAMPLE	207210-002	490	11	1.111
MW3	SAMPLE	207210-003	560	11	1.111
MW4	SAMPLE	207210-004	610	11	1.111
SOURCE	SAMPLE	207210-005	880	11	1.111
L5 COMP	SAMPLE	207210-006	2,180	13	1.250
L10 COMP	SAMPLE	207210-007	1,280	11	1.111
	BLANK	QC467718	ND	10	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Dissolved Solids (TDS)

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Batch#:	144237
Field ID:	ZZZZZZZZZZ	Sampled:	10/22/08
MSS Lab ID:	207108-001	Received:	10/23/08
Matrix:	Water	Prepared:	10/29/08
Units:	mg/L	Analyzed:	10/30/08

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim	Diln Fac
BS	QC467719		104.0	98.00		94	73-120			1.000
BSD	QC467720		104.0	100.0		96	73-120	2	22	1.000
SDUP	QC467721	553.3		568.9	11.11			3	20	1.111

RL= Reporting Limit
RPD= Relative Percent Difference

Total Organic Carbon (TOC)

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Sampled:	10/27/08
Matrix:	Water	Received:	10/27/08
Units:	mg/L	Analyzed:	10/30/08
Batch#:	144265		

Field ID	**Type**	**Lab ID**	**Result**	**RL**	**Diln Fac**
MW1	SAMPLE	207210-001	0.82	0.50	1.000
MW2	SAMPLE	207210-002	0.75	0.50	1.000
MW3	SAMPLE	207210-003	0.75	0.50	1.000
MW4	SAMPLE	207210-004	0.88	0.50	1.000
SOURCE	SAMPLE	207210-005	6.7	0.50	1.000
L5 COMP	SAMPLE	207210-006	73	4.0	8.000
L10 COMP	SAMPLE	207210-007	6.6	1.0	2.000
	BLANK	QC467863	ND	0.50	1.000

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Total Organic Carbon (TOC)

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	144265
MSS Lab ID:	207058-001	Sampled:	10/21/08
Matrix:	Water	Received:	10/21/08
Units:	mg/L	Analyzed:	10/30/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC467864		10.00	9.739	97	90-110		
MS	QC467865	0.9877	2.000	2.822	92	62-124		
MSD	QC467866		2.000	2.897	95	62-124	3	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Surfactants (MBAS)

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	144177
Matrix:	Water	Received:	10/27/08
Units:	mg/L	Analyzed:	10/28/08 14:30
Diln Fac:	1.000		

Field ID	Type	Lab ID	Result	RL	Sampled
MW1	SAMPLE	207210-001	ND	0.20	10/27/08 12:10
MW2	SAMPLE	207210-002	ND	0.20	10/27/08 11:05
MW3	SAMPLE	207210-003	ND	0.20	10/27/08 08:55
MW4	SAMPLE	207210-004	ND	0.20	10/27/08 10:05
SOURCE	SAMPLE	207210-005	ND	0.20	10/27/08 11:45
L5 COMP	SAMPLE	207210-006	ND	0.20	10/27/08
L10 COMP	SAMPLE	207210-007	ND	0.20	10/27/08
	BLANK	QC467480	ND	0.20	

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Surfactants (MBAS)

Lab #:	207210	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Diln Fac:	1.000
Field ID:	MW1	Batch#:	144177
MSS Lab ID:	207210-001	Sampled:	10/27/08 12:10
Matrix:	Water	Received:	10/27/08
Units:	mg/L	Analyzed:	10/28/08 14:30

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**RL**	**%REC**	**Limits**	**RPD**	**Lim**
LCS	QC467481		0.3000	3,021		101	80-120		
SDUP	QC467482	<0.2000		<0.2000	0.2000			NC	30

NC= Not Calculated
RL= Reporting Limit
RPD= Relative Percent Difference

Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

Report Date: Monday, November 24, 2008
Received Date: Friday, October 31, 2008
Received Time: 8:00 am

Turnaround Time: Normal

Client: Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Phone: (510) 486-0900
FAX: (510) 486-0532

Attn: Anna M. Pajarillo

Project: 207210

P.O.#:

Certificate of Analysis

Work Order: 8103142-01 **Sample ID: MW1** **Matrix: Water**

Sampled by: Client **Sampled: 10/27/08 12:10** **Sample Note: 207210-001**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dichloroacetic acid (dcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
HAA5, Total	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Surrogate: 2,3-Dibromopropionic acid	*89 %*			*70-130*			*11/07/08*	11/12/08 cwn	*W8K0243*

Work Order: 8103142-02 **Sample ID: MW2** **Matrix: Water**

Sampled by: Client **Sampled: 10/27/08 11:05** **Sample Note: 207210-002**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dichloroacetic acid (dcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
HAA5, Total	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Surrogate: 2,3-Dibromopropionic acid	*111 %*			*70-130*			*11/07/08*	11/12/08 cwn	*W8K0243*

Work Order: 8103142-03 **Sample ID: MW3** **Matrix: Water**

Sampled by: Client **Sampled: 10/27/08 08:55** **Sample Note: 207210-003**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dichloroacetic acid (dcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243

Certificate of Analysis

Work Order: 8103142-03 **Sample ID: MW3** **Matrix: Water**

Sampled by: Client **Sampled: 10/27/08 08:55** **Sample Note: 207210-003**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
HAA5, Total	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Surrogate: 2,3-Dibromopropionic acid	*134 %*	*S-03*		*70-130*			*11/07/08*	11/12/08 cwn	*W8K0243*

Work Order: 8103142-04 **Sample ID: MW4** **Matrix: Water**

Sampled by: Client **Sampled: 10/27/08 10:05** **Sample Note: 207210-004**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dichloroacetic acid (dcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
HAA5, Total	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Surrogate: 2,3-Dibromopropionic acid	*142 %*	*S-03*		*70-130*			*11/07/08*	11/12/08 cwn	*W8K0243*

Work Order: 8103142-05 **Sample ID: Source** **Matrix: Water**

Sampled by: Client **Sampled: 10/27/08 11:45** **Sample Note: 207210-005**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dichloroacetic acid (dcaa)	**5.5**		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Trichloroacetic acid (tcaa)	**3.3**		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Bromochloroacetic acid (bcaa)	**3.4**		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dibromoacetic acid (dbaa)	**1.5**		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
HAA5, Total	**10**		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Surrogate: 2,3-Dibromopropionic acid	*128 %*			*70-130*			*11/07/08*	11/12/08 cwn	*W8K0243*

Work Order: 8103142-06 **Sample ID: L5 Comp** **Matrix: Water**

Sampled by: Client **Sampled: 10/27/08 00:00** **Sample Note: 207210-006**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dichloroacetic acid (dcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243

Certificate of Analysis

Work Order: **8103142-06** **Sample ID: L5 Comp** **Matrix: Water**

Sampled by: **Client** **Sampled:** **10/27/08 00:00** **Sample Note:** **207210-006**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
HAA5, Total	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/12/08 cwn	W8K0243
Surrogate: 2,3-Dibromopropionic acid	*86 %*			*70-130*			*11/07/08*	11/12/08 cwn	*W8K0243*

Work Order: **8103142-07** **Sample ID: L10 Comp** **Matrix: Water**

Sampled by: **Client** **Sampled:** **10/27/08 00:00** **Sample Note:** **207210-007**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	11/07/08	11/13/08 cwn	W8K0243
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/13/08 cwn	W8K0243
Dichloroacetic acid (dcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/13/08 cwn	W8K0243
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/13/08 cwn	W8K0243
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/13/08 cwn	W8K0243
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/13/08 cwn	W8K0243
HAA5, Total	ND		ug/l	1.0	1	EPA 552.2	11/07/08	11/13/08 cwn	W8K0243
Surrogate: 2,3-Dibromopropionic acid	*114 %*			*70-130*			*11/07/08*	11/13/08 cwn	*W8K0243*

Certificate of Analysis

Weck Laboratories, Inc

HAAs by EPA 552.2 - Quality Control

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Batch W8K0243 - EPA 552.2									
Blank (W8K0243-BLK1)					Prepared: 11/07/08 Analyzed: 11/12/08				
Surrogate: 2,3-Dibromopropionic acid		*11.2*		ug/l	*10.0*	*112*	*70-130*		
Monochloroacetic acid (mcaa)........................		ND		ug/l					
Monobromoacetic acid (mbaa).......................		ND		ug/l					
Dichloroacetic acid (dcaa)...............................		ND		ug/l					
Trichloroacetic acid (tcaa)...............................		ND		ug/l					
Bromochloroacetic acid (bcaa).......................		ND		ug/l					
Dibromoacetic acid (dbaa).............................		ND		ug/l					
HAA5, Total..		ND		ug/l					
LCS (W8K0243-BS1)					Prepared: 11/07/08 Analyzed: 11/12/08				
Surrogate: 2,3-Dibromopropionic acid		*7.20*		ug/l	*10.0*	*72*	*70-130*		
Monochloroacetic acid (mcaa)........................		11.4		ug/l	10.0	114	70-130		
Monobromoacetic acid (mbaa).......................		9.76		ug/l	10.0	98	70-130		
Dichloroacetic acid (dcaa)...............................		11.1		ug/l	10.0	111	70-130		
Trichloroacetic acid (tcaa)...............................		9.18		ug/l	10.0	92	70-130		
Bromochloroacetic acid (bcaa).......................		10.3		ug/l	10.0	103	70-130		
Dibromoacetic acid (dbaa).............................		10.7		ug/l	10.0	107	70-130		
Matrix Spike (W8K0243-MS1)			Source: 8103004-01		Prepared: 11/07/08 Analyzed: 11/12/08				
Surrogate: 2,3-Dibromopropionic acid		*12.0*		ug/l	*10.0*	*120*	*70-130*		
Monochloroacetic acid (mcaa)........................	ND	10.2		ug/l	10.0	102	70-130		
Monobromoacetic acid (mbaa).......................	1.88	12.7		ug/l	10.0	108	70-130		
Dichloroacetic acid (dcaa)...............................	12.7	25.8		ug/l	10.0	130	70-130		
Trichloroacetic acid (tcaa)...............................	9.89	22.2		ug/l	10.0	123	70-130		
Bromochloroacetic acid (bcaa).......................	15.9	30.5	MS-02	ug/l	10.0	146	70-130		
Dibromoacetic acid (dbaa).............................	21.3	37.9	MS-02	ug/l	10.0	166	70-130		
Matrix Spike Dup (W8K0243-MSD1)			Source: 8103004-01		Prepared: 11/07/08 Analyzed: 11/12/08				
Surrogate: 2,3-Dibromopropionic acid		*9.02*		ug/l	*10.0*	*90*	*70-130*		
Monochloroacetic acid (mcaa)........................	ND	10.6		ug/l	10.0	106	70-130	4	30
Monobromoacetic acid (mbaa).......................	1.88	12.6		ug/l	10.0	107	70-130	0.4	30
Dichloroacetic acid (dcaa)...............................	12.7	25.0		ug/l	10.0	123	70-130	3	30
Trichloroacetic acid (tcaa)...............................	9.89	19.5		ug/l	10.0	96	70-130	13	30
Bromochloroacetic acid (bcaa).......................	15.9	29.0	MS-02	ug/l	10.0	131	70-130	5	30
Dibromoacetic acid (dbaa).............................	21.3	34.6	MS-02	ug/l	10.0	132	70-130	9	30

Certificate of Analysis

Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.
ND = NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub = Subcontracted analysis, original report enclosed.
Dil = Dilution Factor
MDL = Method Detection Limit
MDA = Minimum Detectable Activity

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Kim Tu

Authorized Signature

Contact: Kim G Tu (Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

MS-02 = The RPD and/or percent recovery for this QC spike sample cannot be accurately calculated due to the high concentration of analyte inherent in the sample.

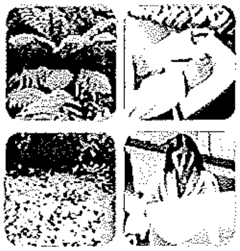
S-03 = High surrogate recovery for this sample is possibly due to a sample matrix effect. The data was accepted since all target analytes were not detected.

e-Hardcopy 2.0
Automated Report

Northern California
ACCUTEST
Laboratories

IT'S ALL IN THE CHEMISTRY

12/01/08



Technical Report for

Locus Technologies

SCVWD Reclaimed Water, CA

27012-07-4200

Accutest Job Number: C3141

Sampling Date: 11/24/08

Report to:

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
hawthornej@locustec.com; wongn@locustec.com

ATTN: Wes Hawthorne

Total number of pages in report: 13

ACCREDITED IN ACCORDANCE WITH nelac

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Laurie Glantz-Murphy

Laurie Glantz-Murphy
Laboratory Director

Client Service contact: Diane Theesen 408-588-0200

ACCUTEST LABORATORIES 50 YEARS 1956-2006

Certifications: CA (08258CA)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

Note: This report is password protected to disallow document modification or assembly.
To obtain a version that can be unlocked, contact your client service representative.

Sections: 1 2 3 4

Table of Contents

-1-

Section 1: Sample Summary 3
Section 2: Sample Results 4
  2.1: C3141-1: L5 COMP 5
Section 3: Misc. Forms 6
  3.1: Chain of Custody 7
Section 4: General Chemistry - QC Data Summaries 9
  4.1: Method Blank and Spike Results Summary 10
  4.2: Blank Spike Duplicate Results Summary 11
  4.3: Matrix Spike Results Summary 12
  4.4: Matrix Spike Duplicate Results Summary 13

Sample Summary

Locus Technologies

Job No: C3141

SCVWD Reclaimed Water, CA
Project No: 27012-07-4200

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
C3141-1	11/24/08	10:00 TM	11/24/08	AQ	Water	L5 COMP

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	L5 COMP		
Lab Sample ID:	C3141-1	**Date Sampled:**	11/24/08
Matrix:	AQ - Water	**Date Received:**	11/24/08
		Percent Solids:	n/a
Project:	SCVWD Reclaimed Water, CA		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Bromide	0.43	0.20	mg/l	1	11/25/08 13:26	RL	EPA 300/SW846 9056A

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14378

PROJECT NAME SCVWD RECLAIMED WATER
PROJECT NUMBER Q7012-07-4200
RECORDER T. Murphy (SIGN)
SAMPLERS T. MURPHY (PRINT)
T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
[✓ C.] Plastic 250ml
D. Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES 10 DAY TAT
[✓ 1.] Standard ✓
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB ACCUTEST

LABORATORY USE ONLY
LAB PROJECT NO. C3141

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO3	HCL		Field Filtered (check)	ANALYSIS REQUESTED BROMIDE									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	11/24/08	1000	L5 COMP -1	—	—	—	C	A	1					X									1						
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES/MISCELLANEOUS
1 x 250mL poly N/P (½ Full)

Field/Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☑

Cooler Temperature: 1.6°C

Relinquished By: (Signature) T. Murphy	Received By: (Signature)	Date 11/24/08	Time 10:29
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
DELIVERED	COOLER	NONE	Thomas Murphy	11/24/08	1025			

Send Lab Results to (Name): WES HAWTHORNE cc NORMAN WONG (Check Office Below)

Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

C3141: Chain of Custody
Page 1 of 2

Northern California
ACCUTEST
Laboratories

Sample Receiving Checklist

Job # C3141

Review Chain of Custody: The Chain of Custody is to be completely and legibly filed out by Client.

☑ Are these regulatory (NPDES) samples? Yes / [✓ No] circle one ☑ Is pH requested? Yes / [✓ No] circle one
☐ Was Client informed that the hold time is 15mins Yes / No circle one If yes, did they consent to continue? ______
☐ Are sample within one-half hold-time? Yes / No circle one If no, was the lab informed? ______
☑ Report to Info is complete and legible, including;
  ☑ Type of Deliverable needed ☑ name ☑ address ☑ phone ☑ email
☐ Bill to info is complete and legible, including: ☐ PO# ☐ Credit card ☐ contact ☐ address ☐ phone ☐ email
☑ Contact and/or Project Mgr identified, including; ☑ phone ☑ email
☑ Project name / number ☐ Special requirements? [✓ Yes] / No circle one
☑ Sample IDs / date & time of collection provided? [✓ Yes] / No circle one
☑ Matrix listed and correct? [✓ Yes] / No circle one
☑ Analyses listed are those we do or client has authorized a subcontract? [✓ Yes] / No circle one
☑ Chain is signed / dated by both client and sample custodian? [✓ Yes] / No circle one
☑ TAT requested available? Approved by ELK

Review Coolers:
☑ Samples / Coolers are at 0-6°C? 1.6°C If sampled within 4hrs, then "on ice" is acceptable.
If a cooler is outside the 0-6°C range; note below the bottles in that cooler below.
Note that ANC does NOT accept evidentiary samples. (We do not lock refrigerators)
Shipment Method: walk In
Custody Seals Present: Yes / [✓ No] circle one Un-broken: Yes / No circle one

Review of Sample Bottles: If you answer no, explain below
☑ IDs / bottle number / Date / Time of bottle labels match CoC?
☑ Sample bottle intact? [✓ Yes] / No circle one
☑ Proper containers and volumes? [✓ Yes] / No circle one
☐ Proper preservatives? Check pH on preserved samples except 1664, 625, 8270, and VOAs and list below. N/A
☐ VOAs received without headspace? Yes / No circle one N/A

Lab #	Client Sample ID	pH Check:	Other Comments / Issues
			1X 250mL poly N/P

☐ Client informed of irregularities at receiving ☐ Project Mgr needs to contact Client for issues
Comments:

:T:\Laboratory\Forms\SampleControl\Form_SampleReceiving_2008-04-12.doc

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C3141
Account: LTCAMV - Locus Technologies
Project: SCVWD Reclaimed Water, CA

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Bromide	GP362/GN819	0.20	<0.20	mg/l	5	5.04	100.8	90-110%
Nitrogen, Nitrate	GP362/GN819	0.10	<0.10	mg/l	2.26	2.05	90.7	90-110%
Sulfate	GP362/GN819	0.50	<0.50	mg/l	15	14.7	98.0	90-110%

Associated Samples:
Batch GP362: C3141-1
(*) Outside of QC limits

BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C3141
Account: LTCAMV - Locus Technologies
Project: SCVWD Reclaimed Water, CA

Analyte	Batch ID	Units	Spike Amount	BSD Result	RPD	QC Limit
Bromide	GP362/GN819	mg/l	5	5.06	0.4	25%
Nitrogen, Nitrate	GP362/GN819	mg/l	2.26	2.04	0.5	25%
Sulfate	GP362/GN819	mg/l	15	14.6	0.7	25%

Associated Samples:
Batch GP362: C3141-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C3141
Account: LTCAMV - Locus Technologies
Project: SCVWD Reclaimed Water, CA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Bromide	GP362/GN819	C3141-1	mg/l	0.43	4	4.2	94.3	80-120%
Nitrogen, Nitrate	GP362/GN819	C3141-1	mg/l	0.20	4	3.6	85.0	80-120%
Sulfate	GP362/GN819	C3141-1	mg/l	853	4	837	-400.0(a)	80-120%

Associated Samples:
Batch GP362: C3141-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C3141
Account: LTCAMV - Locus Technologies
Project: SCVWD Reclaimed Water, CA

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MSD Result	RPD	QC Limit
Bromide	GP362/GN819	C3141-1	mg/l	0.43	4	4.2	0.0	
Nitrogen, Nitrate	GP362/GN819	C3141-1	mg/l	0.20	4	3.6	0.0	
Sulfate	GP362/GN819	C3141-1	mg/l	853	4	837	0.0(a)	

Associated Samples:
Batch GP362: C3141-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Sample Event 2
12/15/2008

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200
EML ID: 609788

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
MPN-Standard Bacteria: 12-21-2009

Service SOPs: MPN-Standard Bacteria (100130)

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200

Date of Receipt: 12-14-2009
Date of Report: 12-21-2009

MPN REPORT

Location: MW-1 Lab ID-Version‡: 2702865-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	46	11	190
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

Location: MW-2 Lab ID-Version‡: 2702867-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	46	11	190
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

Location: MW-3 Lab ID-Version‡: 2702870-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	140	48	400
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.
**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200

Date of Receipt: 12-14-2009
Date of Report: 12-21-2009

MPN REPORT

Location: MW-4
Lab ID-Version‡: 2702872-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	5	1	20
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

Location: L5 Comp
Lab ID-Version‡: 2702874-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	2	0.01	14
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

Location: L10 Comp
Lab ID-Version‡: 2702876-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	< 2	-	14
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.
**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200

Date of Receipt: 12-14-2009
Date of Report: 12-21-2009

MPN REPORT

Location: Source
Lab ID-Version‡: 2702878-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	22	9	54
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.
**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 497309

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 12-18-2008
MPN-Standard Bacteria: 12-22-2008

Project SOPs: MPN-Standard Bacteria (100130)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 12-15-2008
Date of Receipt: 12-15-2008
Date of Report: 12-22-2008

MPN REPORT

Location: MW-1 Lab ID-Version‡: 2199027-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/15/08 16:30	< 2	-	14
Total Coliform	SM 9221 B	12/15/08 16:30	2	0.01	14
E. coli	SM 9221 F	12/15/08 16:30	< 2	-	14

Comments:

Location: MW-2 Lab ID-Version‡: 2199029-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/15/08 16:30	< 2	-	14
Total Coliform	SM 9221 B	12/15/08 16:30	5	1	20
E. coli	SM 9221 F	12/15/08 16:30	< 2	-	14

Comments:

Location: MW-3 Lab ID-Version‡: 2199031-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/15/08 16:30	< 2	-	14
Total Coliform	SM 9221 B	12/15/08 16:30	8	3	26
E. coli	SM 9221 F	12/15/08 16:30	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 12-15-2008
Date of Receipt: 12-15-2008
Date of Report: 12-22-2008

MPN REPORT

Location: MW-4 Lab ID-Version‡: 2199033-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/15/08 16:30	< 2	-	14
Total Coliform	SM 9221 B	12/15/08 16:30	8	3	26
E. coli	SM 9221 F	12/15/08 16:30	< 2	-	14

Comments:

Location: L5Comp Lab ID-Version‡: 2199035-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/15/08 16:30	< 2	-	14
Total Coliform	SM 9221 B	12/15/08 16:30	140	48	400
E. coli	SM 9221 F	12/15/08 16:30	< 2	-	14

Comments:

Location: L10Comp Lab ID-Version‡: 2199037-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/15/08 16:30	< 2	-	14
Total Coliform	SM 9221 B	12/15/08 16:30	81	25	260
E. coli	SM 9221 F	12/15/08 16:30	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 12-15-2008
Date of Receipt: 12-15-2008
Date of Report: 12-22-2008

MPN REPORT

Location: Source — Lab ID-Version‡: 2199039-1

Sample size: 100 | Unit: 100 ml | Percent solid: N/A

Bacteria	Method	Setup Time	MPN*/Unit	LCL**	UCL**
Fecal Coliform	SM 9221 E	12/15/08 16:30	< 2	-	14
Total Coliform	SM 9221 B	12/15/08 16:30	24	8	72
E. coli	SM 9221 F	12/15/08 16:30	< 2	-	14

Comments:

Location: 4877 — Lab ID-Version‡: 2199041-1

Sample size: 100 | Unit: 100 ml | Percent solid: N/A

Bacteria	Method	Setup Time	MPN*/Unit	LCL**	UCL**
Fecal Coliform	SM 9221 E	12/15/08 16:30	< 2	-	14
Total Coliform	SM 9221 B	12/15/08 16:30	< 2	-	14
E. coli	SM 9221 F	12/15/08 16:30	< 2	-	14

Comments:

Location: 4876 — Lab ID-Version‡: 2199043-1

Sample size: 100 | Unit: 100 ml | Percent solid: N/A

Bacteria	Method	Setup Time	MPN*/Unit	LCL**	UCL**
Fecal Coliform	SM 9221 E	12/15/08 16:30	< 2	-	14
Total Coliform	SM 9221 B	12/15/08 16:30	14	5	40
E. coli	SM 9221 F	12/15/08 16:30	< 2	-	14

Comments:

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*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 12-15-2008
Date of Receipt: 12-15-2008
Date of Report: 12-18-2008

HETEROTROPHIC PLATE COUNT REPORT

Location:	MW-1	MW-2	MW-3
Comments (see below)	None	None	None
Lab ID-Version‡:	2199028-1	2199030-1	2199032-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	12/15/2008 at 04:30 PM	12/15/2008 at 04:30 PM	12/15/2008 at 04:30 PM
Incubation Info	49 hrs at 35 +- 0.5C	49 hrs at 35 +- 0.5C	49 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	4,800	4,700	3,900

Comments:

Location:	MW-4	L5Comp	L10Comp
Comments (see below)	None	None	None
Lab ID-Version‡:	2199034-1	2199036-1	2199038-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	12/15/2008 at 04:30 PM	12/15/2008 at 04:30 PM	12/15/2008 at 04:30 PM
Incubation Info	49 hrs at 35 +- 0.5C	49 hrs at 35 +- 0.5C	49 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	11,000	6,500	3,400

Comments:

Location:	Source	4877	4876
Comments (see below)	None	None	None
Lab ID-Version‡:	2199040-1	2199042-1	2199044-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:1	Plate Count Agar 1:10
Setup Time	12/15/2008 at 04:30 PM	12/15/2008 at 04:30 PM	12/15/2008 at 04:30 PM
Incubation Info	49 hrs at 35 +- 0.5C	49 hrs at 35 +- 0.5C	49 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	6,300	< 1	6,600

Comments:

* Estimated result

‡ A "Version" greater than 1 indicates amended data.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
02/15/2009
MWH LABORATORIES

ACCREDITED IN ACCORDANCE WITH nelac 01114CA

RCZ: Richard.C.Zimmer

Project Manager

Report#: 302317
Project:
RECYCLED-WATER-STUDY
Group: Chemistry

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
PO #: 27011-07-4200
Group #: 302317
Project #: RECYCLED-WATER-STUDY
Project Manager: Richard.C.Zimmer
Phone: 626-386-1157

The following samples were received from you on **December 16, 2008**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Matrix	Sample Date
200812170019	MW-1	Water	15-Dec-2008 0000
	@NDMA @PFC EDTA by Ion Chrom-Subcontract		
200812170020	MW-2	Water	15-Dec-2008 0000
	@NDMA @PFC EDTA by Ion Chrom-Subcontract		
200812170021	MW-3	Water	15-Dec-2008 0000
	@NDMA @PFC EDTA by Ion Chrom-Subcontract		
200812170022	MW-4	Water	15-Dec-2008 0000
	@NDMA @PFC EDTA by Ion Chrom-Subcontract		
200812170023	Source	Water	15-Dec-2008 0000
	@525PLUS @NDMA @PFC EDTA by Ion Chrom-Subcontract		
200812170024	4876	Water	15-Dec-2008 0000
	@525PLUS @NDMA @PFC EDTA by Ion Chrom-Subcontract		
200812170025	4877	Water	15-Dec-2008 0000
	@525PLUS @NDMA @PFC EDTA by Ion Chrom-Subcontract		
200812170026	L-5 Composite	Water	15-Dec-2008 0000
	@PFC EDTA by Ion Chrom-Subcontract		
200812170027	L-10 Composite	Water	15-Dec-2008 0000
	@PFC EDTA by Ion Chrom-Subcontract		

Test Description

@525PLUS -- Semivolatiles by GCMS
@NDMA -- Nitrosamines by CLLE
@PFC -- Perfluorinated compounds

MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

3023176 1432

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY: PAGE 2 OF 2

LOGIN COMMENTS:

SAMPLES CHECKED AGAINST COC BY: JT

SAMPLES LOGGED IN BY: JS

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 6° or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN X PARTIALLY FROZEN ___ THAWED ___ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: LOCUS TECHNOLOGIES

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ ☐

NON-COMPLIANCE SAMPLES ☐

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: LOCUS

P.O.# / JOB # / PROJECT : 27011-07-4200

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☑ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE: MURPHY

TAT requested: rush by adv notice only

STD ✓ 1 week __ 3 day __ 2 day __ 1 day __

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	SAMPLER COMMENTS
12/15/08		MW-1	MW-1 *	RGW	X		
		MW-2	MW-2 *	RGW	X		
	3/44	MW-3	MW-3 *	RGW	X		
		MW-4	MW-4 *	RGW	X		
		SOURCE	SOURCE	FW	X		
		4876	4876	FW	X		
		4877	4877	FW	X		

* - Did not receive 525 plus bottles

* MATRIX TYPES:
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	12/15/08	
RECEIVED BY:	[illegible] Tripp	Jan Tripp	MWH	12/16	8:00am
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

Page 1

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #
Date Sampled
Date Received

Joseph Ureno **Your MWL Project Manager**
626-386-1116 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# 49383

Sampler: please return this paper with your samples

Created by

Order Date
10/20/08
Date Needed by Client
10/27/08
Date Samples to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	**Comments**
13	@NDMA		2 1L amber glass +1ml thio (8%)		
13	@525PLUS		2 1L amber glass + 2 ml of 6N HCl	UN 1789	
13	@PFC 4/44		1 x 125 ml poly		
13	EDTASUB		1 x 125 ml amber glass, no preservative		
~~13~~	~~NTASUB~~		~~125 ml amber glass, no preservative~~		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY:

LOGIN COMMENTS: ____________

SAMPLES CHECKED AGAINST COC BY: JT

SAMPLES LOGGED IN BY: S

SAMPLE TEMP WHEN REC'D AT LAB: 6° (Compliance: 6°C or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN X PARTIALLY FROZEN ___ THAWED ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: LOCUS TECHNOLOGIES

SYSTEM #:

MWH LABS CLIENT CODE: LOCUS

P.O.# / JOB # / PROJECT: 27011-07-4200

SAMPLER PRINTED NAME AND SIGNATURE: MURPHY

TAT requested: rush by adv notice only
STD ✓ 1 week ___ 3 day ___ 2 day ___ 1 day ___

(check for yes) COMPLIANCE SAMPLES ☐ - Requires state forms ☐

(check for yes) NON-COMPLIANCE SAMPLES ☐

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☑ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP															SAMPLER COMMENTS
12/15/08		L-5 COMP		RGW		X															
		L-10 COMP		RGW		X															

5/44

* MATRIX TYPES:
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Thomas Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	12/15/08	
RECEIVED BY:		Jon Taylor	MWH	12/16	8:00
RELINQUISHED BY:					
RECEIVED BY:					
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ___ OF ___

MWH Laboratories, a Divsion of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Page 1

Group #

Date Sampled

Date Received

Joseph Ureno **Your MWL Project Manager**
626-386-1116 **Direct Phone/Voice Mail**

Client Code LOCUS RECLAIMED **ProjectName**
Project Code RECLAIMED
PO# / Job#

BO# 49383

Sampler: please return this paper with your samples

Created by

Order Date
10/20/08

Date Needed by Client
10/27/08

Date Samples to Arrive at MWL

Ship Sample Kits to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258

Send Report to

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

ATTN: Norman Wong
PHONE: (650) 641-8258
FAX: (650) 960-0739

Billing Address

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

# of Samples	Tests	Qteline#	Bottles-Qty for each sample, type & preservative if any	UN DOT #	**Comments**
~~13~~	~~@NDMA~~		~~2 1L amber glass +1ml thio (8%)~~		
~~13~~	~~@525PLUS~~		~~2 1L amber glass + 2 ml of 6N HCl~~	UN 1789	
13	@PFC 6/44		1 x 125 ml poly		
13	EDTASUB		1 x 125 ml amber glass, no preservative		
~~13~~	~~NTASUB~~		~~125 ml amber glass, no preservative~~		

Code Status Date Shipped Via Tracking # # of Coolers Prepared By Allen Glover

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 302317

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
12/16/2008

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	200812170019	**MW-1**				
	200812170020	**MW-2**				
02/02/2009 01:39	Perfluoro octanoic acid - PFOA		9.0		ng/L	5
	200812170021	**MW-3**				
	200812170022	**MW-4**				
02/02/2009 01:59	Perfluoro octanesulfonate-PFOS		13		ng/L	5
	200812170023	**Source**				
12/27/2008 01:43	N-Nitroso dimethylamine (NDMA)		380		ng/l	10
02/02/2009 02:09	Perfluoro octanesulfonate-PFOS		67		ng/L	5
02/02/2009 02:09	Perfluoro octanoic acid - PFOA		65		ng/L	5
	200812170024	**4876**				
12/27/2008 02:15	N-Nitroso dimethylamine (NDMA)		460		ng/l	10
02/02/2009 02:19	Perfluoro octanesulfonate-PFOS		44		ng/L	5
02/02/2009 02:19	Perfluoro octanoic acid - PFOA		43		ng/L	5
	200812170025	**4877**				
	200812170026	**L-5 Composite**				
02/02/2009 02:39	Perfluoro butanoic acid- PFBA		43		ng/L	20
02/02/2009 02:39	Perfluoro octanoic acid - PFOA		6.4		ng/L	5
	200812170027	**L-10 Composite**				

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data
Report: 302317

Locus Technologies
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Samples Received on:
12/16/2008

MW-1 (200812170019) — **Sampled on 12/15/2008 0000**

EPA 300 (Mod) - EDTA by Ion Chrom-Subcontract

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2009		(EPA 300 (Mod))	EDTA by Ion Chrom-Subcontract	ND	ug/L	100	1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/02/2009 01:09	505398	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/02/2009 01:09	505398	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	02/02/2009 01:09	505398	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	02/02/2009 01:09	505398	(MWH PFC)	PFBA-C13	96	%		1
	02/02/2009 01:09	505398	(MWH PFC)	PFOA-C13	94	%		1
	02/02/2009 01:09	505398	(MWH PFC)	PFOS-C13	98	%		1

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/18/2008	12/24/2008 17:33	504838	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND (BD,L3)	ng/l	2	1
12/18/2008	12/24/2008 17:33	504838	(EPA 1625MOD)	NDMA-D6	76	%		1

MW-2 (200812170020) — **Sampled on 12/15/2008 0000**

EPA 300 (Mod) - EDTA by Ion Chrom-Subcontract

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2009		(EPA 300 (Mod))	EDTA by Ion Chrom-Subcontract	ND	ug/L	100	1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/02/2009 01:39	505398	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/02/2009 01:39	505398	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	02/02/2009 01:39	505398	(MWH PFC)	Perfluoro octanoic acid - PFOA	9.0	ng/L	5	1
	02/02/2009 01:39	505398	(MWH PFC)	PFBA-C13	96	%		1
	02/02/2009 01:39	505398	(MWH PFC)	PFOA-C13	79	%		1
	02/02/2009 01:39	505398	(MWH PFC)	PFOS-C13	82	%		1

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/18/2008	12/24/2008 18:05	504838	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND (BD,L3)	ng/l	2	1
12/18/2008	12/24/2008 18:05	504838	(EPA 1625MOD)	NDMA-D6	72	%		1

MW-3 (200812170021) — **Sampled on 12/15/2008 0000**

EPA 300 (Mod) - EDTA by Ion Chrom-Subcontract

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2009		(EPA 300 (Mod))	EDTA by Ion Chrom-Subcontract	ND	ug/L	100	1

Rounding on totals after summation.
(c) - indicates calculated results

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/02/2009 01:49	505398	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/02/2009 01:49	505398	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	02/02/2009 01:49	505398	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	02/02/2009 01:49	505398	(MWH PFC)	PFBA-C13	95	%		1
	02/02/2009 01:49	505398	(MWH PFC)	PFOA-C13	84	%		1
	02/02/2009 01:49	505398	(MWH PFC)	PFOS-C13	82	%		1

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/18/2008	12/24/2008 18:37	504838	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND (BD,L3)	ng/l	2	1
12/18/2008	12/24/2008 18:37	504838	(EPA 1625MOD)	NDMA-D6	70	%		1

MW-4 (200812170022) **Sampled on 12/15/2008 0000**

EPA 300 (Mod) - EDTA by Ion Chrom-Subcontract

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2009		(EPA 300 (Mod))	EDTA by Ion Chrom-Subcontract	ND	ug/L	100	1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/02/2009 01:59	505398	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/02/2009 01:59	505398	(MWH PFC)	Perfluoro octanesulfonate-PFOS	13	ng/L	5	1
	02/02/2009 01:59	505398	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	02/02/2009 01:59	505398	(MWH PFC)	PFBA-C13	96	%		1
	02/02/2009 01:59	505398	(MWH PFC)	PFOA-C13	80	%		1
	02/02/2009 01:59	505398	(MWH PFC)	PFOS-C13	79	%		1

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/18/2008	12/24/2008 19:09	504838	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND (BD,L3)	ng/l	2	1
12/18/2008	12/24/2008 19:09	504838	(EPA 1625MOD)	NDMA-D6	87	%		1

Source (200812170023) **Sampled on 12/15/2008 0000**

EPA 300 (Mod) - EDTA by Ion Chrom-Subcontract

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2009		(EPA 300 (Mod))	EDTA by Ion Chrom-Subcontract	ND	ug/L	100	1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/02/2009 02:09	505398	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/02/2009 02:09	505398	(MWH PFC)	Perfluoro octanesulfonate-PFOS	67	ng/L	5	1

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Samples Received on:
12/16/2008

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/02/2009 02:09	505398	(MWH PFC)	Perfluoro octanoic acid - PFOA	65	ng/L	5	1
	02/02/2009 02:09	505398	(MWH PFC)	PFBA-C13	103	%		1
	02/02/2009 02:09	505398	(MWH PFC)	PFOA-C13	73	%		1
	02/02/2009 02:09	505398	(MWH PFC)	PFOS-C13	80	%		1

EPA 525.2 - Semivolatiles by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Aldrin	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1

Rounding on totals after summation.
(c) - indicates calculated results

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Heptachlor	ND	ug/L	0.03	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:27	504592	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Thiobencarb	ND	ug/L	0.2	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	98	%		1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Perylene-d12	78	%		1
12/19/2008	12/22/2008 16:27	504592	(EPA 525.2)	Triphenylphosphate	107	%		1

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/18/2008	12/27/2008 01:43	505393	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	380 (BB,BD,L3)	ng/l	10	5
12/18/2008	12/27/2008 01:43	505393	(EPA 1625MOD)	NDMA-D6	125	%		1

4876 (200812170024) **Sampled on 12/15/2008 0000**

EPA 300 (Mod) - EDTA by Ion Chrom-Subcontract

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2009		(EPA 300 (Mod))	EDTA by Ion Chrom-Subcontract	ND	ug/L	100	1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/02/2009 02:19	505398	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/02/2009 02:19	505398	(MWH PFC)	Perfluoro octanesulfonate-PFOS	44	ng/L	5	1
	02/02/2009 02:19	505398	(MWH PFC)	Perfluoro octanoic acid - PFOA	43	ng/L	5	1
	02/02/2009 02:19	505398	(MWH PFC)	PFBA-C13	109	%		1
	02/02/2009 02:19	505398	(MWH PFC)	PFOA-C13	89	%		1
	02/02/2009 02:19	505398	(MWH PFC)	PFOS-C13	86	%		1

EPA 525.2 - Semivolatiles by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/19/2008	12/22/2008 16:51	504592	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:51	504592	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:51	504592	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:51	504592	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
12/19/2008	12/22/2008 16:51	504592	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1

Rounding on totals after summation.
(c) - indicates calculated results

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Laboratory Data
Report: 302317

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Samples Received on:
12/16/2008

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Aldrin	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1

Rounding on totals after summation.
(c) - indicates calculated results

Locus Technologies
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Mountain View, CA 94043

Samples Received on:
12/16/2008

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Heptachlor	ND	ug/L	0.03	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Thiobencarb	ND	ug/L	0.2	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	99	%		1

Rounding on totals after summation.
(c) - indicates calculated results

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Perylene-d12	88	%		1
12/19/2008	12/22/2008	16:51	504592	(EPA 525.2)	Triphenylphosphate	107	%		1

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/18/2008	12/27/2008	02:15	505393	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	460 (BB,BD,L3)	ng/l	10	5
12/18/2008	12/27/2008	02:15	505393	(EPA 1625MOD)	NDMA-D6	105	%		1

4877 (200812170025) **Sampled on 12/15/2008 0000**

EPA 300 (Mod) - EDTA by Ion Chrom-Subcontract

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2009			(EPA 300 (Mod))	EDTA by Ion Chrom-Subcontract	ND	ug/L	100	1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/02/2009	02:29	505398	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/02/2009	02:29	505398	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	02/02/2009	02:29	505398	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	02/02/2009	02:29	505398	(MWH PFC)	PFBA-C13	89	%		1
	02/02/2009	02:29	505398	(MWH PFC)	PFOA-C13	106	%		1
	02/02/2009	02:29	505398	(MWH PFC)	PFOS-C13	123	%		1

EPA 525.2 - Semivolatiles by GCMS

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Aldrin	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1

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Samples Received on:
12/16/2008

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Heptachlor	ND	ug/L	0.03	1
12/19/2008	12/22/2008	17:14	504592	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1

Rounding on totals after summation.
(c) - indicates calculated results

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Samples Received on:
12/16/2008

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.05	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.1	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Thiobencarb	ND	ug/L	0.2	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	100	%		1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Perylene-d12	84	%		1
12/19/2008	12/22/2008 17:14	504592	(EPA 525.2)	Triphenylphosphate	106	%		1

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/18/2008	12/24/2008 20:44	504838	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND (BD,L3)	ng/l	2	1
12/18/2008	12/24/2008 20:44	504838	(EPA 1625MOD)	NDMA-D6	88	%		1

L-5 Composite (200812170026)

Sampled on 12/15/2008 0000

EPA 300 (Mod) - EDTA by Ion Chrom-Subcontract

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2009		(EPA 300 (Mod))	EDTA by Ion Chrom-Subcontract	ND	ug/L	100	1

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Samples Received on:
12/16/2008

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	MWH PFC - Perfluorinated compounds							
02/02/2009	02:39	505398	(MWH PFC)	Perfluoro butanoic acid- PFBA	43	ng/L	20	1
02/02/2009	02:39	505398	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
02/02/2009	02:39	505398	(MWH PFC)	Perfluoro octanoic acid - PFOA	6.4	ng/L	5	1
02/02/2009	02:39	505398	(MWH PFC)	PFBA-C13	125	%		1
02/02/2009	02:39	505398	(MWH PFC)	PFOA-C13	108	%		1
02/02/2009	02:39	505398	(MWH PFC)	PFOS-C13	96	%		1

L-10 Composite (200812170027) **Sampled on 12/15/2008 0000**

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	EPA 300 (Mod) - EDTA by Ion Chrom-Subcontract							
01/07/2009			(EPA 300 (Mod))	EDTA by Ion Chrom-Subcontract	ND	ug/L	100	1
	MWH PFC - Perfluorinated compounds							
02/02/2009	02:49	505398	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
02/02/2009	02:49	505398	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
02/02/2009	02:49	505398	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
02/02/2009	02:49	505398	(MWH PFC)	PFBA-C13	112	%		1
02/02/2009	02:49	505398	(MWH PFC)	PFOA-C13	90	%		1
02/02/2009	02:49	505398	(MWH PFC)	PFOS-C13	87	%		1

Locus Technologies
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Mountain View, CA 94043

Flags Legend:

BB - Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL). No major impact on the reported result since the target analyte is = 10x the concentration level.

BD - Target analyte detected in method blank is above CA DHS recommended value of 0.5 and did not meet the internal blank limit of 1/3 MRL. (1/3 of MRL = 0.7)

L3 - The associated blank spike recovery was above method acceptance limits.

Method Blank and LCS contamination resulted in detections in method blank. However, results for all affected samples are Non-Detect and MS, MSD and other QC did meet lab/method acceptance criteria. Therefore, data is acceptable for reporting.

Locus Technologies

QC Ref # 504592 - Semivolatiles by GCMS **Analysis Date: 12/22/2008**

200812170023	Source	Analyzed by: JWC
200812170024	4876	Analyzed by: JWC
200812170025	4877	Analyzed by: JWC

QC Ref # 504838 - Nitrosamines by CLLE **Analysis Date: 12/24/2008**

200812170019	MW-1	Analyzed by: DLO
200812170020	MW-2	Analyzed by: DLO
200812170021	MW-3	Analyzed by: DLO
200812170022	MW-4	Analyzed by: DLO
200812170025	4877	Analyzed by: DLO

QC Ref # 505393 - Nitrosamines by CLLE **Analysis Date: 12/27/2008**

200812170023	Source	Analyzed by: DLO
200812170024	4876	Analyzed by: DLO

QC Ref # 505398 - Perfluorinated compounds **Analysis Date: 02/02/2009**

200812170019	MW-1	Analyzed by: JYW
200812170020	MW-2	Analyzed by: JYW
200812170021	MW-3	Analyzed by: JYW
200812170022	MW-4	Analyzed by: JYW
200812170023	Source	Analyzed by: JYW
200812170024	4876	Analyzed by: JYW
200812170025	4877	Analyzed by: JYW
200812170026	L-5 Composite	Analyzed by: JYW
200812170027	L-10 Composite	Analyzed by: JYW

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Laboratory
QC Report: 302317

Locus Technologies

QC Ref# 504592 - Semivolatiles by GCMS by EPA 525.2

Analysis Date: 12/22/2008

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,3-Dimethyl-2-nitrobenzene (S)			97.8	%		(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)			95.8	%		(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			97.4	%		(70-130)		
MRLLW	1,3-Dimethyl-2-nitrobenzene (S)			96.2	%		(70-130)		
MS_200812170025	1,3-Dimethyl-2-nitrobenzene (S)	100		98.4	%		(70-130)		
LCS1	2,4-Dinitrotoluene		2.0	2.00	ug/L	100	(70-130)		
LCS2	2,4-Dinitrotoluene		2.0	2.08	ug/L	104	(70-130)	20	3.9
MBLK	2,4-Dinitrotoluene			<0.1	ug/L				
MS_200812170025	2,4-Dinitrotoluene	ND	2.0	2.09	ug/L	105	(70-130)		
LCS1	2,6-Dinitrotoluene		2.0	1.93	ug/L	97	(70-130)		
LCS2	2,6-Dinitrotoluene		2.0	2.12	ug/L	106	(70-130)	20	9.4
MBLK	2,6-Dinitrotoluene			<0.1	ug/L				
MS_200812170025	2,6-Dinitrotoluene	ND	2.0	2.00	ug/L	100	(70-130)		
LCS1	4,4-DDD		2.0	2.11	ug/L	105	(70-130)		
LCS2	4,4-DDD		2.0	2.19	ug/L	109	(70-130)	20	3.7
MBLK	4,4-DDD			<0.1	ug/L				
MS_200812170025	4,4-DDD	ND	2.0	2.13	ug/L	106	(70-130)		
LCS1	4,4-DDE		2.0	1.98	ug/L	99	(70-130)		
LCS2	4,4-DDE		2.0	2.06	ug/L	103	(70-130)	20	4.0
MBLK	4,4-DDE			<0.1	ug/L				
MS_200812170025	4,4-DDE	ND	2.0	1.98	ug/L	99	(70-130)		
LCS1	4,4-DDT		2.0	2.08	ug/L	104	(70-130)		
LCS2	4,4-DDT		2.0	2.16	ug/L	108	(70-130)	20	3.3
MBLK	4,4-DDT			<0.1	ug/L				
MS_200812170025	4,4-DDT	ND	2.0	2.08	ug/L	104	(70-130)		
LCS1	Acenaphthene		2.0	2.07	ug/L	103	(70-130)		
LCS2	Acenaphthene		2.0	2.11	ug/L	106	(70-130)	20	1.9
MBLK	Acenaphthene			<0.1	ug/L				
MS_200812170025	Acenaphthene	ND	2.0	2.12	ug/L	106	(70-130)		
LCS1	Acenaphthene-d10 (I)			107	%		(50-150)		
LCS2	Acenaphthene-d10 (I)			95.8	%		(50-150)		
MBLK	Acenaphthene-d10 (I)			105	%		(50-150)		
MRLLW	Acenaphthene-d10 (I)			103	%		(50-150)		
MS_200812170025	Acenaphthene-d10 (I)			101	%		(50-150)		
LCS1	Acenaphthylene		2.0	2.12	ug/L	106	(70-130)		
LCS2	Acenaphthylene		2.0	2.2	ug/L	110	(70-130)	20	3.7
MBLK	Acenaphthylene			<0.1	ug/L				
MS_200812170025	Acenaphthylene	ND	2.0	2.2	ug/L	110	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Acetochlor		2.0	2.14	ug/L	107	(70-130)		
LCS2	Acetochlor		2.0	2.33	ug/L	116	(70-130)	20	8.5
MBLK	Acetochlor			<0.1	ug/L				
MS_200812170025	Acetochlor	ND	2.0	2.25	ug/L	112	(70-130)		
LCS1	Alachlor		2.0	2.09	ug/L	105	(70-130)		
LCS2	Alachlor		2.0	2.13	ug/L	106	(70-130)	20	1.9
MBLK	Alachlor			<0.05	ug/L				
MS_200812170025	Alachlor	ND	2.0	2.17	ug/L	109	(70-130)		
LCS1	Aldrin		2.0	1.88	ug/L	94	(70-130)		
LCS2	Aldrin		2.0	2.03	ug/L	101	(70-130)	20	7.7
MBLK	Aldrin			<0.05	ug/L				
MS_200812170025	Aldrin	ND	2.0	2.04	ug/L	102	(70-130)		
LCS1	Alpha-BHC		2.0	2.25	ug/L	113	(70-130)		
LCS2	Alpha-BHC		2.0	2.25	ug/L	112	(70-130)	20	0.0
MBLK	Alpha-BHC			<0.1	ug/L				
MS_200812170025	Alpha-BHC	ND	2.0	2.23	ug/L	112	(70-130)		
LCS1	alpha-Chlordane		2.0	2.06	ug/L	103	(70-130)		
LCS2	alpha-Chlordane		2.0	2.12	ug/L	106	(70-130)	20	2.4
MBLK	alpha-Chlordane			<0.05	ug/L				
MS_200812170025	alpha-Chlordane	ND	2.0	2.13	ug/L	107	(70-130)		
LCS1	Anthracene		2.0	2.1	ug/L	105	(70-130)		
LCS2	Anthracene		2.0	2.17	ug/L	109	(70-130)	20	3.3
MBLK	Anthracene			<0.02	ug/L				
MRLLW	Anthracene		0.02	0.0210	ug/L	105	(50-150)		
MS_200812170025	Anthracene	ND	2.0	2.19	ug/L	109	(70-130)		
LCS1	Atrazine		2.0	2.3	ug/L	115	(70-130)		
LCS2	Atrazine		2.0	2.37	ug/L	119	(70-130)	20	3.0
MBLK	Atrazine			<0.05	ug/L				
MS_200812170025	Atrazine	ND	2.0	2.36	ug/L	118	(70-130)		
LCS1	Benz(a)Anthracene		2.0	2.03	ug/L	101	(70-130)		
LCS2	Benz(a)Anthracene		2.0	2.14	ug/L	107	(70-130)	20	5.3
MBLK	Benz(a)Anthracene			<0.05	ug/L				
MS_200812170025	Benz(a)Anthracene	ND	2.0	2.08	ug/L	104	(70-130)		
LCS1	Benzo(a)pyrene		2.0	2.26	ug/L	113	(70-130)		
LCS2	Benzo(a)pyrene		2.0	2.33	ug/L	117	(70-130)	20	3.0
MBLK	Benzo(a)pyrene			<0.02	ug/L				
MRLLW	Benzo(a)pyrene		0.02	0.0200	ug/L	100	(50-150)		
MS_200812170025	Benzo(a)pyrene	ND	2.0	2.3	ug/L	115	(70-130)		
LCS1	Benzo(b)Fluoranthene		2.0	2.25	ug/L	113	(70-130)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Benzo(b)Fluoranthene		2.0	2.21	ug/L	111	(70-130)	20	1.8
MBLK	Benzo(b)Fluoranthene			<0.02	ug/L				
MRLLW	Benzo(b)Fluoranthene		0.02	0.0240	ug/L	120	(50-150)		
MS_200812170025	Benzo(b)Fluoranthene	ND	2.0	2.2	ug/L	110	(70-130)		
LCS1	Benzo(g,h,i)Perylene		2.0	2.31	ug/L	116	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2.0	2.33	ug/L	116	(70-130)	20	0.86
MBLK	Benzo(g,h,i)Perylene			<0.05	ug/L				
MS_200812170025	Benzo(g,h,i)Perylene	ND	2.0	2.3	ug/L	115	(70-130)		
LCS1	Benzo(k)Fluoranthene		2.0	2.07	ug/L	104	(70-130)		
LCS2	Benzo(k)Fluoranthene		2.0	2.28	ug/L	114	(70-130)	20	9.7
MBLK	Benzo(k)Fluoranthene			<0.02	ug/L				
MRLLW	Benzo(k)Fluoranthene		0.02	0.0210	ug/L	105	(50-150)		
MS_200812170025	Benzo(k)Fluoranthene	ND	2.0	2.24	ug/L	112	(70-130)		
LCS1	Beta-BHC		2.0	2.16	ug/L	108	(70-130)		
LCS2	Beta-BHC		2.0	2.23	ug/L	112	(70-130)	20	3.2
MBLK	Beta-BHC			<0.1	ug/L				
MS_200812170025	Beta-BHC	ND	2.0	2.2	ug/L	110	(70-130)		
LCS1	Bromacil		2.0	2.18	ug/L	109	(70-130)		
LCS2	Bromacil		2.0	2.32	ug/L	116	(70-130)	20	6.2
MBLK	Bromacil			<0.2	ug/L				
MS_200812170025	Bromacil	ND	2.0	2.3	ug/L	115	(70-130)		
LCS1	Butachlor		2.0	2.27	ug/L	113	(70-130)		
LCS2	Butachlor		2.0	2.34	ug/L	117	(70-130)	20	3.0
MBLK	Butachlor			<0.05	ug/L				
MS_200812170025	Butachlor	ND	2.0	2.3	ug/L	115	(70-130)		
LCS1	Butylbenzylphthalate		2.0	2.1	ug/L	105	(70-130)		
LCS2	Butylbenzylphthalate		2.0	2.24	ug/L	112	(70-130)	20	6.5
MBLK	Butylbenzylphthalate			<0.5	ug/L				
MS_200812170025	Butylbenzylphthalate	ND	2.0	2.23	ug/L	112	(70-130)		
LCS1	Caffeine by method 525mod		2.0	1.87	ug/L	93	(45-137)		
LCS2	Caffeine by method 525mod		2.0	1.89	ug/L	95	(45-137)	20	1.1
MBLK	Caffeine by method 525mod			<0.05	ug/L				
MS_200812170025	Caffeine by method 525mod	ND	2.0	1.96	ug/L	98	(46-144)		
LCS1	Chlorobenzilate		2.0	2.2	ug/L	110	(70-130)		
LCS2	Chlorobenzilate		2.0	2.29	ug/L	114	(70-130)	20	4.0
MBLK	Chlorobenzilate			<0.1	ug/L				
MS_200812170025	Chlorobenzilate	ND	2.0	2.3	ug/L	115	(70-130)		
LCS1	Chloroneb		2.0	2.1	ug/L	105	(70-130)		
LCS2	Chloroneb		2.0	2.17	ug/L	108	(70-130)	20	3.3

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Chloroneb			<0.1	ug/L				
MS_200812170025	Chloroneb	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Chlorothalonil(Draconil,Bravo)		2.0	2.11	ug/L	106	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2.0	2.25	ug/L	112	(70-130)	20	6.4
MBLK	Chlorothalonil(Draconil,Bravo)			<0.1	ug/L				
MS_200812170025	Chlorothalonil(Draconil,Bravo)	ND	2.0	2.21	ug/L	110	(70-130)		
LCS1	Chlorpyrifos (Dursban)		2.0	2.06	ug/L	103	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2.0	2.23	ug/L	111	(70-130)	20	7.4
MBLK	Chlorpyrifos (Dursban)			<0.05	ug/L				
MS_200812170025	Chlorpyrifos (Dursban)	ND	2.0	2.17	ug/L	109	(70-130)		
LCS1	Chrysene		2.0	2.08	ug/L	104	(70-130)		
LCS2	Chrysene		2.0	2.16	ug/L	108	(70-130)	20	3.8
MBLK	Chrysene			<0.02	ug/L				
MRLLW	Chrysene		0.02	0.0230	ug/L	115	(50-150)		
MS_200812170025	Chrysene	ND	2.0	2.12	ug/L	106	(70-130)		
LCS1	Chrysene-d12 (I)			111	%		(50-150)		
LCS2	Chrysene-d12 (I)			100	%		(50-150)		
MBLK	Chrysene-d12 (I)			89.7	%		(50-150)		
MRLLW	Chrysene-d12 (I)			94.9	%		(50-150)		
MS_200812170025	Chrysene-d12 (I)			103	%		(50-150)		
LCS1	Delta-BHC		2.0	2.12	ug/L	106	(70-130)		
LCS2	Delta-BHC		2.0	2.19	ug/L	110	(70-130)	20	3.3
MBLK	Delta-BHC			<0.1	ug/L				
MS_200812170025	Delta-BHC	ND	2.0	2.19	ug/L	110	(70-130)		
LCS1	Di(2-Ethylhexyl)phthalate		2.0	2.09	ug/L	105	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2.0	2.13	ug/L	107	(70-130)	20	1.9
MBLK	Di(2-Ethylhexyl)phthalate			<0.6	ug/L				
MS_200812170025	Di(2-Ethylhexyl)phthalate	ND	2.0	2.13	ug/L	107	(70-130)		
LCS1	Di-(2-Ethylhexyl)adipate		2.0	2.02	ug/L	101	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2.0	2.12	ug/L	106	(70-130)	20	4.8
MBLK	Di-(2-Ethylhexyl)adipate			<0.6	ug/L				
MS_200812170025	Di-(2-Ethylhexyl)adipate	ND	2.0	2.08	ug/L	104	(70-130)		
LCS1	Di-n-Butylphthalate		4.0	4.4	ug/L	110	(70-130)		
LCS2	Di-n-Butylphthalate		4.0	4.73	ug/L	118	(70-130)	20	7.2
MBLK	Di-n-Butylphthalate			<1	ug/L				
MS_200812170025	Di-n-Butylphthalate	ND	4.0	4.59	ug/L	115	(70-130)		
LCS1	Di-N-octylphthalate		2.0	2.06	ug/L	103	(70-130)		
LCS2	Di-N-octylphthalate		2.0	2.03	ug/L	102	(70-130)	20	1.5
MBLK	Di-N-octylphthalate			<0.1	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200812170025	Di-N-octylphthalate	ND	2.0	2.03	ug/L	101	(70-130)		
LCS1	Diazinon (Qualitative)		2.0	2.12	ug/L	106	(70-130)		
LCS2	Diazinon (Qualitative)		2.0	2.24	ug/L	112	(70-130)	20	5.5
MBLK	Diazinon (Qualitative)			<0.1	ug/L				
MS_200812170025	Diazinon (Qualitative)	ND	2.0	2.22	ug/L	111	(70-130)		
LCS1	Dibenz(a,h)Anthracene		2.0	2.38	ug/L	119	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2.0	2.39	ug/L	119	(70-130)	20	0.42
MBLK	Dibenz(a,h)Anthracene			<0.05	ug/L				
MS_200812170025	Dibenz(a,h)Anthracene	ND	2.0	2.37	ug/L	118	(70-130)		
LCS1	Dichlorvos (DDVP)		2.0	2.14	ug/L	107	(70-130)		
LCS2	Dichlorvos (DDVP)		2.0	2.24	ug/L	112	(70-130)	20	4.6
MBLK	Dichlorvos (DDVP)			<0.05	ug/L				
MS_200812170025	Dichlorvos (DDVP)	ND	2.0	2.22	ug/L	111	(70-130)		
LCS1	Dieldrin		2.0	2.1	ug/L	105	(70-130)		
LCS2	Dieldrin		2.0	2.17	ug/L	109	(70-130)	20	3.3
MBLK	Dieldrin			<0.2	ug/L				
MS_200812170025	Dieldrin	ND	2.0	2.17	ug/L	108	(70-130)		
LCS1	Diethylphthalate		2.0	2.19	ug/L	110	(70-130)		
LCS2	Diethylphthalate		2.0	2.27	ug/L	114	(70-130)	20	3.6
MBLK	Diethylphthalate			<0.5	ug/L				
MS_200812170025	Diethylphthalate	ND	2.0	2.25	ug/L	113	(70-130)		
LCS1	Dimethoate		2.0	1.72	ug/L	86	(35-100)		
LCS2	Dimethoate		2.0	1.84	ug/L	92	(35-100)	20	6.7
MBLK	Dimethoate			<0.1	ug/L				
MS_200812170025	Dimethoate	ND	2.0	1.84	ug/L	92	(34-111)		
LCS1	Dimethylphthalate		2.0	2.2	ug/L	110	(70-130)		
LCS2	Dimethylphthalate		2.0	2.28	ug/L	114	(70-130)	20	3.6
MBLK	Dimethylphthalate			<0.5	ug/L				
MS_200812170025	Dimethylphthalate	ND	2.0	2.28	ug/L	114	(70-130)		
LCS1	Endosulfan I (Alpha)		2.0	2.02	ug/L	101	(70-130)		
LCS2	Endosulfan I (Alpha)		2.0	2.26	ug/L	113	(70-130)	20	11
MBLK	Endosulfan I (Alpha)			<0.1	ug/L				
MS_200812170025	Endosulfan I (Alpha)	ND	2.0	2.19	ug/L	110	(70-130)		
LCS1	Endosulfan II (Beta)		2.0	2.15	ug/L	107	(70-130)		
LCS2	Endosulfan II (Beta)		2.0	2.25	ug/L	113	(70-130)	20	4.5
MBLK	Endosulfan II (Beta)			<0.1	ug/L				
MS_200812170025	Endosulfan II (Beta)	ND	2.0	2.15	ug/L	108	(70-130)		
LCS1	Endosulfan Sulfate		2.0	2.19	ug/L	110	(70-130)		
LCS2	Endosulfan Sulfate		2.0	2.27	ug/L	114	(70-130)	20	4.0

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Endosulfan Sulfate			<0.1	ug/L				
MS_200812170025	Endosulfan Sulfate	ND	2.0	2.21	ug/L	111	(70-130)		
LCS1	Endrin		2.0	2.23	ug/L	112	(70-130)		
LCS2	Endrin		2.0	2.32	ug/L	116	(70-130)	20	4.0
MBLK	Endrin			<0.2	ug/L				
MS_200812170025	Endrin	ND	2.0	2.33	ug/L	116	(70-130)		
LCS1	Endrin Aldehyde		2.0	1.96	ug/L	98	(70-130)		
LCS2	Endrin Aldehyde		2.0	2.02	ug/L	101	(70-130)	20	3.0
MBLK	Endrin Aldehyde			<0.1	ug/L				
MS_200812170025	Endrin Aldehyde	ND	2.0	1.85	ug/L	93	(70-130)		
LCS1	EPTC		2.0	2.14	ug/L	107	(70-130)		
LCS2	EPTC		2.0	2.22	ug/L	111	(70-130)	20	3.7
MBLK	EPTC			<0.1	ug/L				
MS_200812170025	EPTC	ND	2.0	2.17	ug/L	108	(70-130)		
LCS1	Fluoranthene		2.0	2.11	ug/L	106	(70-130)		
LCS2	Fluoranthene		2.0	2.2	ug/L	110	(70-130)	20	4.2
MBLK	Fluoranthene			<0.1	ug/L				
MS_200812170025	Fluoranthene	ND	2.0	2.17	ug/L	108	(70-130)		
LCS1	Fluorene		2.0	2.17	ug/L	108	(70-130)		
LCS2	Fluorene		2.0	2.25	ug/L	113	(70-130)	20	4.1
MBLK	Fluorene			<0.05	ug/L				
MS_200812170025	Fluorene	ND	2.0	2.22	ug/L	111	(70-130)		
LCS1	gamma-Chlordane		2.0	2.14	ug/L	107	(70-130)		
LCS2	gamma-Chlordane		2.0	2.25	ug/L	113	(70-130)	20	5.0
MBLK	gamma-Chlordane			<0.05	ug/L				
MS_200812170025	gamma-Chlordane	ND	2.0	2.08	ug/L	104	(70-130)		
LCS1	Heptachlor		2.0	2.05	ug/L	102	(70-130)		
LCS2	Heptachlor		2.0	2.1	ug/L	105	(70-130)	20	2.4
MBLK	Heptachlor			<0.03	ug/L				
MRLLW	Heptachlor		0.02	0.0220	ug/L	110	(50-150)		
MS_200812170025	Heptachlor	ND	2.0	2.13	ug/L	106	(70-130)		
LCS1	Heptachlor Epoxide (isomer B)		2.0	2.13	ug/L	107	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2.0	2.24	ug/L	112	(70-130)	20	5.0
MBLK	Heptachlor Epoxide (isomer B)			<0.05	ug/L				
MS_200812170025	Heptachlor Epoxide (isomer B)	ND	2.0	2.21	ug/L	111	(70-130)		
LCS1	Hexachlorobenzene		2.0	2.07	ug/L	104	(70-130)		
LCS2	Hexachlorobenzene		2.0	2.15	ug/L	107	(70-130)	20	3.8
MBLK	Hexachlorobenzene			<0.05	ug/L				
MS_200812170025	Hexachlorobenzene	ND	2.0	2.11	ug/L	106	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Hexachlorocyclopentadiene		2.0	1.99	ug/L	100	(70-130)		
LCS2	Hexachlorocyclopentadiene		2.0	2.08	ug/L	104	(70-130)	20	4.4
MBLK	Hexachlorocyclopentadiene			<0.05	ug/L				
MS_200812170025	Hexachlorocyclopentadiene	ND	2.0	2.1	ug/L	105	(70-130)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2.0	2.36	ug/L	118	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2.0	2.38	ug/L	119	(70-130)	20	0.84
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.05	ug/L				
MS_200812170025	Indeno(1,2,3,c,d)Pyrene	ND	2.0	2.37	ug/L	118	(70-130)		
LCS1	Isophorone		2.0	2.08	ug/L	104	(70-130)		
LCS2	Isophorone		2.0	2.18	ug/L	109	(70-130)	20	4.7
MBLK	Isophorone			<0.5	ug/L				
MS_200812170025	Isophorone	ND	2.0	2.15	ug/L	108	(70-130)		
LCS1	Lindane		2.0	2.15	ug/L	108	(70-130)		
LCS2	Lindane		2.0	2.15	ug/L	108	(70-130)	20	0.0
MBLK	Lindane			<0.04	ug/L				
MRLLW	Lindane		0.02	0.0220	ug/L	110	(50-150)		
MS_200812170025	Lindane	ND	2.0	2.18	ug/L	109	(70-130)		
LCS1	Malathion		2.0	2.28	ug/L	114	(70-130)		
LCS2	Malathion		2.0	2.34	ug/L	117	(70-130)	20	2.6
MBLK	Malathion			<0.1	ug/L				
MS_200812170025	Malathion	ND	2.0	2.3	ug/L	115	(70-130)		
LCS1	Methoxychlor		2.0	2.35	ug/L	118	(70-130)		
LCS2	Methoxychlor		2.0	2.43	ug/L	121	(70-130)	20	3.4
MBLK	Methoxychlor			<0.1	ug/L				
MS_200812170025	Methoxychlor	ND	2.0	2.46	ug/L	123	(70-130)		
LCS1	Metolachlor		2.0	2.24	ug/L	112	(70-130)		
LCS2	Metolachlor		2.0	2.31	ug/L	115	(70-130)	20	3.1
MBLK	Metolachlor			<0.05	ug/L				
MS_200812170025	Metolachlor	ND	2.0	2.28	ug/L	114	(70-130)		
LCS1	Metribuzin		2.0	2.15	ug/L	108	(70-130)		
LCS2	Metribuzin		2.0	2.29	ug/L	114	(70-130)	20	6.3
MBLK	Metribuzin			<0.05	ug/L				
MS_200812170025	Metribuzin	ND	2.0	2.22	ug/L	111	(70-130)		
LCS1	Molinate		2.0	2.18	ug/L	109	(70-130)		
LCS2	Molinate		2.0	2.22	ug/L	111	(70-130)	20	1.8
MBLK	Molinate			<0.1	ug/L				
MS_200812170025	Molinate	ND	2.0	2.25	ug/L	112	(70-130)		
LCS1	Naphthalene		2.0	2.04	ug/L	102	(70-130)		
LCS2	Naphthalene		2.0	2.08	ug/L	104	(70-130)	20	1.9

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Naphthalene			<0.3	ug/L				
MS_200812170025	Naphthalene	ND	2.0	2.09	ug/L	104	(70-130)		
LCS1	Parathion		2.0	2.07	ug/L	104	(70-130)		
LCS2	Parathion		2.0	2.21	ug/L	110	(70-130)	20	6.5
MBLK	Parathion			<0.1	ug/L				
MS_200812170025	Parathion	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Pendimethalin		2.0	2.06	ug/L	103	(70-130)		
LCS2	Pendimethalin		2.0	2.19	ug/L	109	(70-130)	20	6.1
MBLK	Pendimethalin			<0.1	ug/L				
MS_200812170025	Pendimethalin	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Pentachlorophenol		8.0	8.1	ug/L	101	(70-130)		
LCS2	Pentachlorophenol		8.0	8.43	ug/L	105	(70-130)	20	4.0
MBLK	Pentachlorophenol			<1	ug/L				
MS_200812170025	Pentachlorophenol	ND	8.0	8.17	ug/L	102	(70-130)		
LCS1	Permethrin (mixed isomers)		4.0	4.15	ug/L	104	(70-130)		
LCS2	Permethrin (mixed isomers)		4.0	4.17	ug/L	104	(70-130)	20	0.48
MBLK	Permethrin (mixed isomers)			<0.1	ug/L				
MS_200812170025	Permethrin (mixed isomers)	ND	4.0	4.17	ug/L	104	(70-130)		
LCS1	Perylene-d12 (S)			95.7	%		(70-130)		
LCS2	Perylene-d12 (S)			95.6	%		(70-130)		
MBLK	Perylene-d12 (S)			79.1	%		(70-130)		
MRLLW	Perylene-d12 (S)			81.5	%		(70-130)		
MS_200812170025	Perylene-d12 (S)	84		94.1	%		(70-130)		
LCS1	Phenanthrene		2.0	2.12	ug/L	106	(70-130)		
LCS2	Phenanthrene		2.0	2.19	ug/L	110	(70-130)	20	3.3
MBLK	Phenanthrene			<0.04	ug/L				
MRLLW	Phenanthrene		0.02	0.0230	ug/L	115	(50-150)		
MS_200812170025	Phenanthrene	ND	2.0	2.18	ug/L	109	(70-130)		
LCS1	Phenanthrene-d10 (I)			111	%		(50-150)		
LCS2	Phenanthrene-d10 (I)			98.8	%		(50-150)		
MBLK	Phenanthrene-d10 (I)			107	%		(50-150)		
MRLLW	Phenanthrene-d10 (I)			106	%		(50-150)		
MS_200812170025	Phenanthrene-d10 (I)			104	%		(50-150)		
LCS1	Propachlor		2.0	2.2	ug/L	110	(70-130)		
LCS2	Propachlor		2.0	2.29	ug/L	114	(70-130)	20	4.0
MBLK	Propachlor			<0.05	ug/L				
MS_200812170025	Propachlor	ND	2.0	2.33	ug/L	116	(70-130)		
LCS1	Pyrene		2.0	2.15	ug/L	107	(70-130)		
LCS2	Pyrene		2.0	2.25	ug/L	113	(70-130)	20	4.5

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Pyrene			<0.05	ug/L				
MS_200812170025	Pyrene	ND	2.0	2.21	ug/L	111	(70-130)		
LCS1	Simazine		2.0	2.08	ug/L	104	(70-130)		
LCS2	Simazine		2.0	2.17	ug/L	109	(70-130)	20	4.2
MBLK	Simazine			<0.05	ug/L				
MS_200812170025	Simazine	ND	2.0	2.22	ug/L	111	(70-130)		
LCS1	Terbacil		2.0	2.25	ug/L	112	(70-130)		
LCS2	Terbacil		2.0	2.36	ug/L	118	(70-130)	20	4.8
MBLK	Terbacil			<0.1	ug/L				
MS_200812170025	Terbacil	ND	2.0	2.37	ug/L	118	(70-130)		
LCS1	Terbuthylazine		2.0	2.29	ug/L	114	(70-130)		
LCS2	Terbuthylazine		2.0	2.41	ug/L	121	(70-130)	20	5.1
MBLK	Terbuthylazine			<0.1	ug/L				
MS_200812170025	Terbuthylazine	ND	2.0	2.32	ug/L	116	(70-130)		
LCS1	Thiobencarb		2.0	2.17	ug/L	108	(70-130)		
LCS2	Thiobencarb		2.0	2.25	ug/L	112	(70-130)	20	3.6
MBLK	Thiobencarb			<0.2	ug/L				
MS_200812170025	Thiobencarb	ND	2.0	2.24	ug/L	112	(70-130)		
LCS1	trans-Nonachlor		2.0	2.14	ug/L	107	(70-130)		
LCS2	trans-Nonachlor		2.0	2.27	ug/L	114	(70-130)	20	6.3
MBLK	trans-Nonachlor			<0.05	ug/L				
MS_200812170025	trans-Nonachlor	ND	2.0	2.21	ug/L	110	(70-130)		
LCS1	Trifluralin		2.0	2.1	ug/L	105	(70-130)		
LCS2	Trifluralin		2.0	2.21	ug/L	110	(70-130)	20	5.1
MBLK	Trifluralin			<0.1	ug/L				
MS_200812170025	Trifluralin	ND	2.0	2.26	ug/L	113	(70-130)		
LCS1	Triphenylphosphate (S)			104	%		(70-130)		
LCS2	Triphenylphosphate (S)			107	%		(70-130)		
MBLK	Triphenylphosphate (S)			105	%		(70-130)		
MRLLW	Triphenylphosphate (S)			106	%		(70-130)		
MS_200812170025	Triphenylphosphate (S)	106		105	%		(70-130)		

QC Ref# 504838 - Nitrosamines by CLLE by EPA 1625MOD **Analysis Date: 12/24/2008**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	N-Nitroso dimethylamine (NDMA)		2.0	3.3	ng/L	**165**	(70-130)		0.0
LCS2	N-Nitroso dimethylamine (NDMA)		2.0	3.2	ng/L	**160**	(70-130)	20	3.1
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MS_200901130002	N-Nitroso dimethylamine (NDMA)	ND	10	9.69	ng/L	93	(70-130)		
MSD_200901130002	N-Nitroso dimethylamine (NDMA)	ND	10	10.1	ng/L	98	(70-130)	20	4.3
LCS1	NDMA-D6 (S)			116	%		(50-150)		
LCS2	NDMA-D6 (S)			101	%		(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	NDMA-D6 (S)			95.0	%		(50-150)		
MS_200901130002	NDMA-D6 (S)	104		100	%		(50-150)		
MSD_200901130002	NDMA-D6 (S)	104		99.0	%		(50-150)		

QC Ref# 505398 - Perfluorinated compounds by MWH PFC **Analysis Date: 02/02/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluoro butanoic acid- PFBA		50	44.0	ng/L	88	(70-130)		
LCS2	Perfluoro butanoic acid- PFBA		50	49.0	ng/L	98	(70-130)	20	11
MBLK	Perfluoro butanoic acid- PFBA			<50	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		20	19.0	ng/L	95	(50-150)		
MS_200812170027	Perfluoro butanoic acid- PFBA	ND	50	49.8	ng/l	85	(50-150)		
MSD_200812170027	Perfluoro butanoic acid- PFBA	ND	50	56.0	ng/l	97	(50-150)	20	12
LCS1	Perfluoro octanesulfonate-PFOS		50	51.8	ng/L	104	(70-130)		
LCS2	Perfluoro octanesulfonate-PFOS		50	48.9	ng/L	98	(70-130)	20	5.8
MBLK	Perfluoro octanesulfonate-PFOS			<50	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		5.0	5.41	ng/L	108	(50-150)		
MS_200812170027	Perfluoro octanesulfonate-PFOS	ND	50	46.6	ng/l	92	(50-150)		
MSD_200812170027	Perfluoro octanesulfonate-PFOS	ND	50	53.6	ng/l	105	(50-150)	20	14
LCS1	Perfluoro octanoic acid - PFOA		50	48.8	ng/L	98	(70-130)		
LCS2	Perfluoro octanoic acid - PFOA		50	49.5	ng/L	99	(70-130)	20	1.4
MBLK	Perfluoro octanoic acid - PFOA			<20	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	5.23	ng/L	105	(50-150)		
MS_200812170027	Perfluoro octanoic acid - PFOA	ND	50	44.4	ng/l	80	(50-150)		
MSD_200812170027	Perfluoro octanoic acid - PFOA	ND	50	46.5	ng/l	84	(50-150)	20	4.6
LCS1	PFBA-C13 (I)			94.8	%		(50-150)		
LCS2	PFBA-C13 (I)			91.9	%		(50-150)		
MBLK	PFBA-C13 (I)			100	%		(50-150)		
MRL_CHK	PFBA-C13 (I)			90.3	%		(50-150)		
MS_200812170027	PFBA-C13 (I)	112		117	%		(50-150)		
MSD_200812170027	PFBA-C13 (I)	112		116	%		(50-150)		
LCS1	PFOA-C13 (I)			104	%		(50-150)		
LCS2	PFOA-C13 (I)			99.9	%		(50-150)		
MBLK	PFOA-C13 (I)			97.7	%		(50-150)		
MRL_CHK	PFOA-C13 (I)			107	%		(50-150)		
MS_200812170027	PFOA-C13 (I)	90		107	%		(50-150)		
MSD_200812170027	PFOA-C13 (I)	90		102	%		(50-150)		
LCS1	PFOS-C13 (I)			101	%		(50-150)		
LCS2	PFOS-C13 (I)			92.5	%		(50-150)		
MBLK	PFOS-C13 (I)			103	%		(50-150)		
MRL_CHK	PFOS-C13 (I)			101	%		(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200812170027	PFOS-C13 (I)	87		103	%		(50-150)		
MSD_200812170027	PFOS-C13 (I)	87		92.8	%		(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates
are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

MWH Laboratories - Monrovia, CA			
Lab Report 2009-00940			
Results Prepared for: Joseph Ureno			
Date of Analysis: 1-6-09 & 1-7-09			
January 14, 2009			
MP ID	**Sample**	**EDTA**	**NTA**
		mg/L	**mg/L**
00940-1	200812170019 Project # 302317	< 0.100	< 0.100
00940-2	200812170020 Project # 302317	< 0.100	< 0.100
00940-3	200812170021 Project # 302317	< 0.100	< 0.100
00940-4	200812170022 Project # 302317	< 0.100	< 0.100
00940-5	200812170023 Project # 302317	< 0.100	< 0.100
00940-6	200812170024 Project # 302317	< 0.100	< 0.100
00940-7	200812170025 Project # 302317	< 0.100	< 0.100
00940-8	200812170026 Project # 302317	< 0.100	< 0.100
00940-9	200812170027 Project # 302317	< 0.100	< 0.100
00940-9 Dup	200812170027 Project # 302317 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.508	0.470
	QC Value	0.515	0.497
	% Recovery	98.641	94.567
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:___________________________________

MWH Laboratories - Monrovia, CA
Lab Report 2009-00940
Results Prepared for: Joseph Ureno
Date of Analysis: 1-6-09 & 1-7-09
January 14, 2009

MP ID	**Sample**	**EDTA** **mg/L**	**NTA** **mg/L**
00940-1	200812170019 Project # 302317	< 0.100	< 0.100
00940-2	200812170020 Project # 302317	< 0.100	< 0.100
00940-3	200812170021 Project # 302317	< 0.100	< 0.100
00940-4	200812170022 Project # 302317	< 0.100	< 0.100
00940-5	200812170023 Project # 302317	< 0.100	< 0.100
00940-6	200812170024 Project # 302317	< 0.100	< 0.100
00940-7	200812170025 Project # 302317	< 0.100	< 0.100
00940-8	200812170026 Project # 302317	< 0.100	< 0.100
00940-9	200812170027 Project # 302317	< 0.100	< 0.100
00940-9 Dup	200812170027 Project # 302317 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.508	0.470
	QC Value	0.515	0.497
	% Recovery	98.641	94.567
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

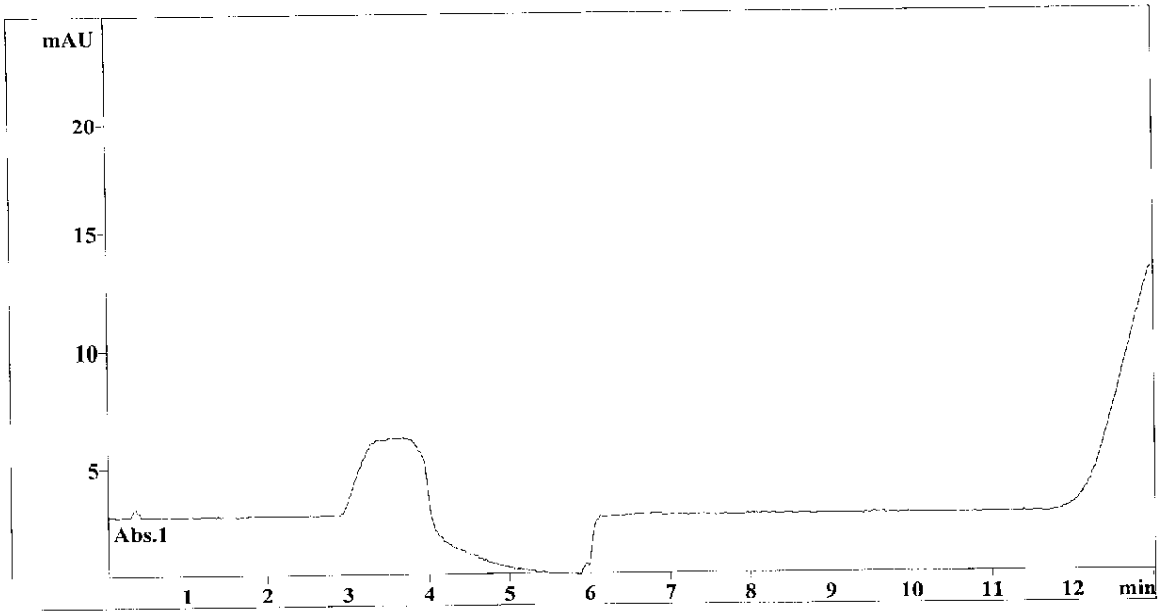
Report by: Leigh Ann Kitzmiller

Report date: 1/8/2009 12:45:31 PM
Printed by: lai

Ident: ~~2009-14A~~ 00940-1
Analysis from: 1/6/2009 5:11:44 PM
File: t1061711.chw Last save: 1/6/2009 5:24:51 PM

Method: EDTA, NTA.mtw Last save: 1/6/2009 2:15:47 PM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33565

SAMPLE:
:
Vial number: 12
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

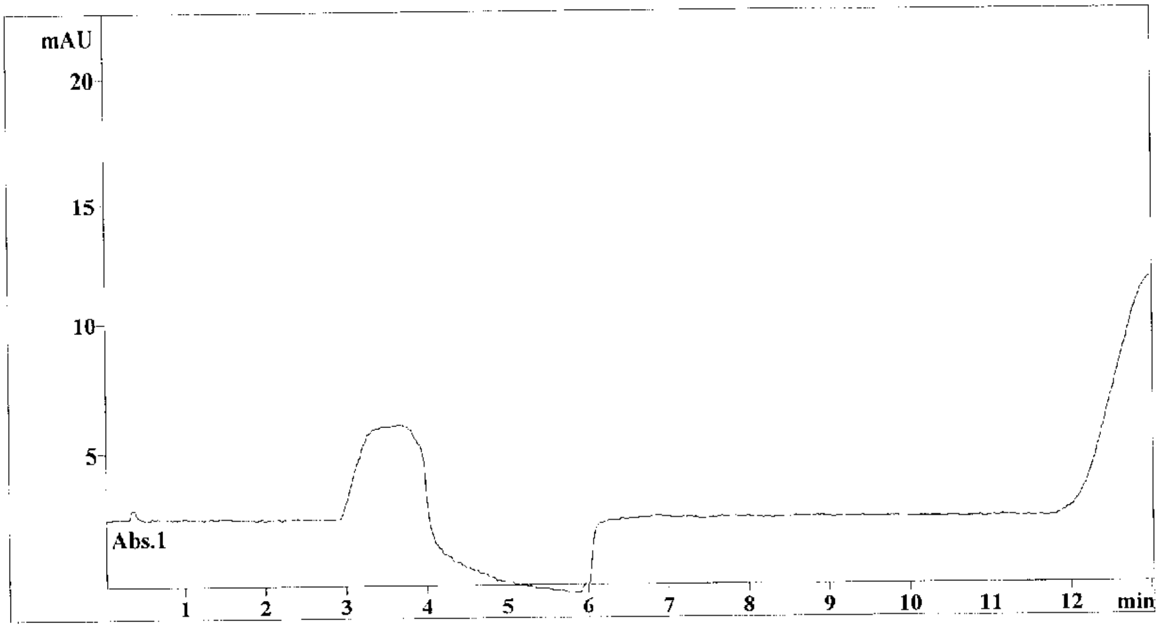
This report has been created by IC Net
METROHM LTD

Report date: 1/8/2009 12:45:34 PM
Printed by: lai

Ident: ~~2009-14B~~ 00940-2
Analysis from: 1/6/2009 5:27:59 PM
File: t1061727.chw Last save: 1/6/2009 5:41:05 PM

Method: EDTA, NTA.mtw Last save: 1/6/2009 2:15:47 PM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33566

SAMPLE:
:
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

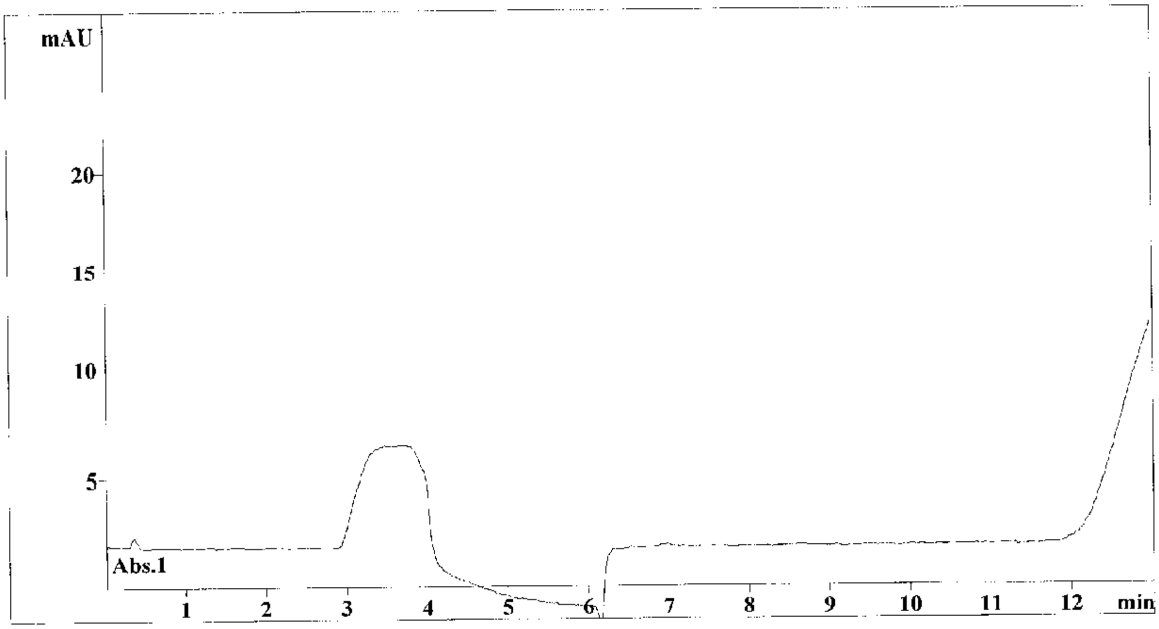
This report has been created by IC Net
METROHM LTD

Report date: 1/8/2009 12:45:40 PM
Printed by: lai

Ident: ~~2009-14C~~ 00940-3
Analysis from: 1/6/2009 8:47:55 PM
File: t1062047.chw Last save: 1/6/2009 9:01:01 PM

Method: EDTA, NTA.mtw Last save: 1/6/2009 2:15:47 PM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33578

SAMPLE:
:
Vial number: 14
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

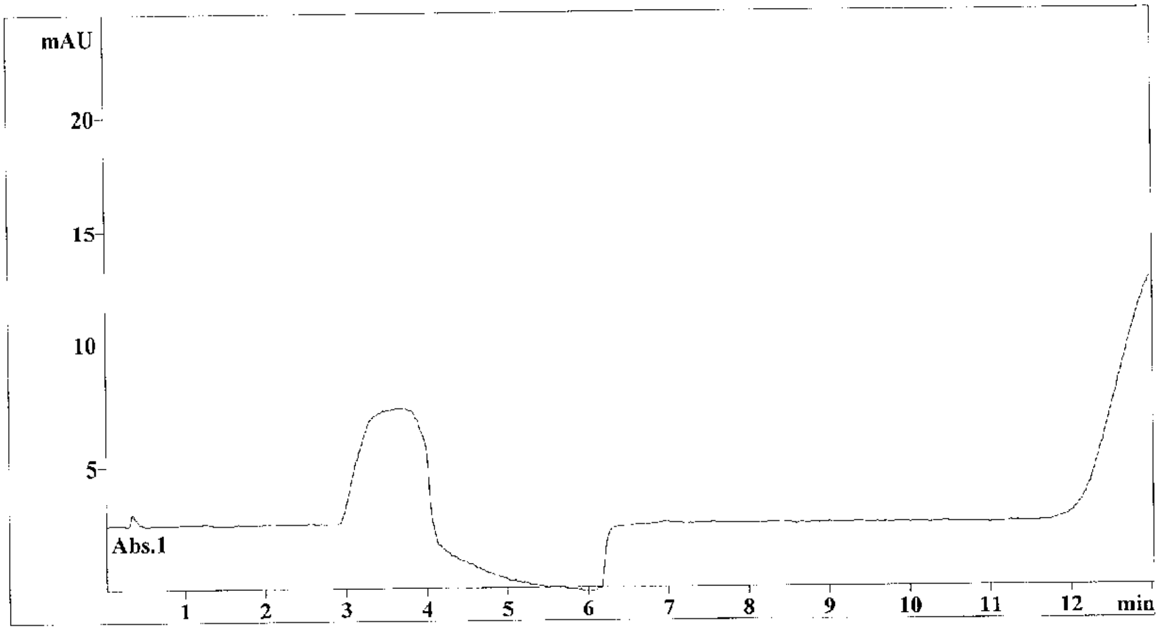
This report has been created by IC Net
METROHM LTD

Report date: 1/8/2009 12:45:44 PM
Printed by: lai

Ident: ~~2009-14D~~ 00940-4
Analysis from: 1/6/2009 9:04:10 PM
File: t1062104.chw Last save: 1/6/2009 9:17:16 PM

Method: EDTA, NTA.mtw Last save: 1/6/2009 2:15:47 PM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33579

SAMPLE:
:
Vial number: 15
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

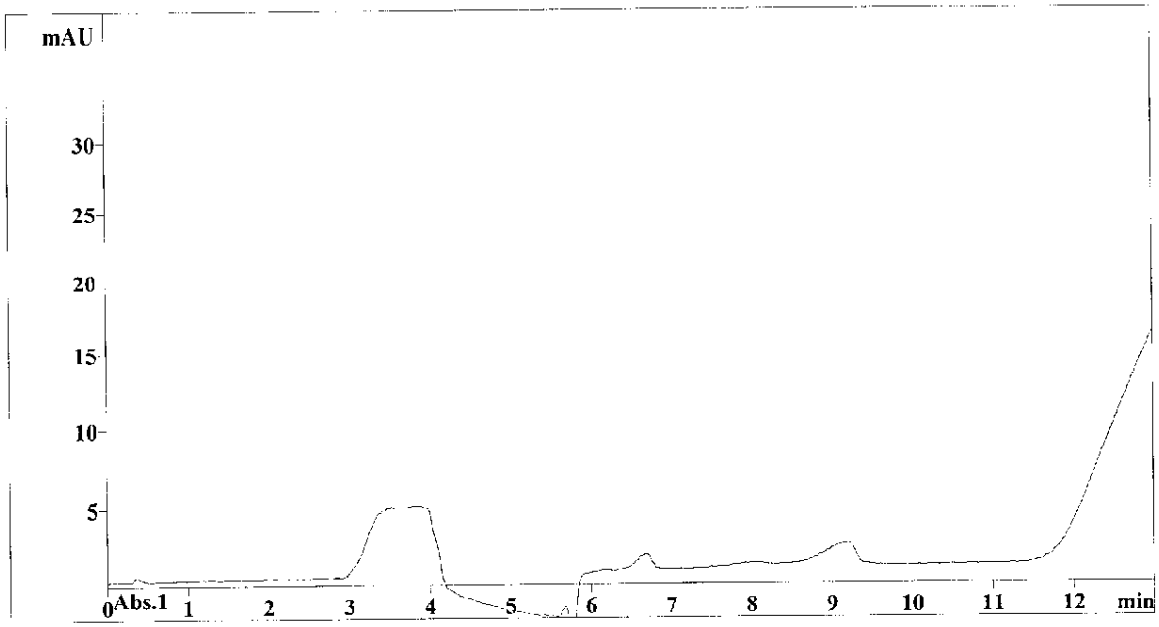
No peaks

This report has been created by IC Net
METROHM LTD

Report date: 1/8/2009 12:45:52 PM
Printed by: lai

Ident: ~~2009-14E~~ 00940-S
Analysis from: 1/7/2009 9:43:17 AM
File: t1070943.chw Last save: 1/7/2009 9:56:24 AM
Modified!
Method: EDTA, NTA.mtw Last save: 1/6/2009 2:15:47 PM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33585

SAMPLE:
:
Vial number: 16
Volume: 1.0 μL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

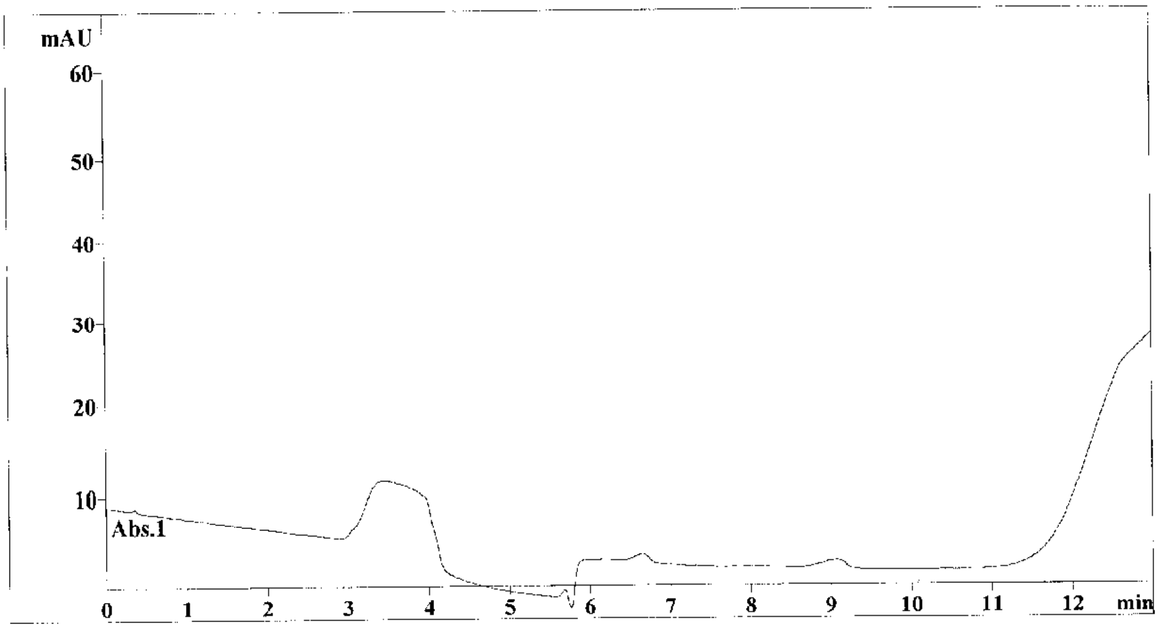
No peaks

This report has been created by IC Net
METROHM LTD

Report date: 1/8/2009 12:46:20 PM
Printed by: lai

Ident: ~~2009-14F~~ 00940-6
Analysis from: 1/6/2009 6:37:57 PM
File: t1061837.chw Last save: 1/6/2009 6:51:03 PM
Modified!
Method: EDTA, NTA.mtw Last save: 1/6/2009 2:15:47 PM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33570

SAMPLE:
:
Vial number: 17
Volume: 1.0 μL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

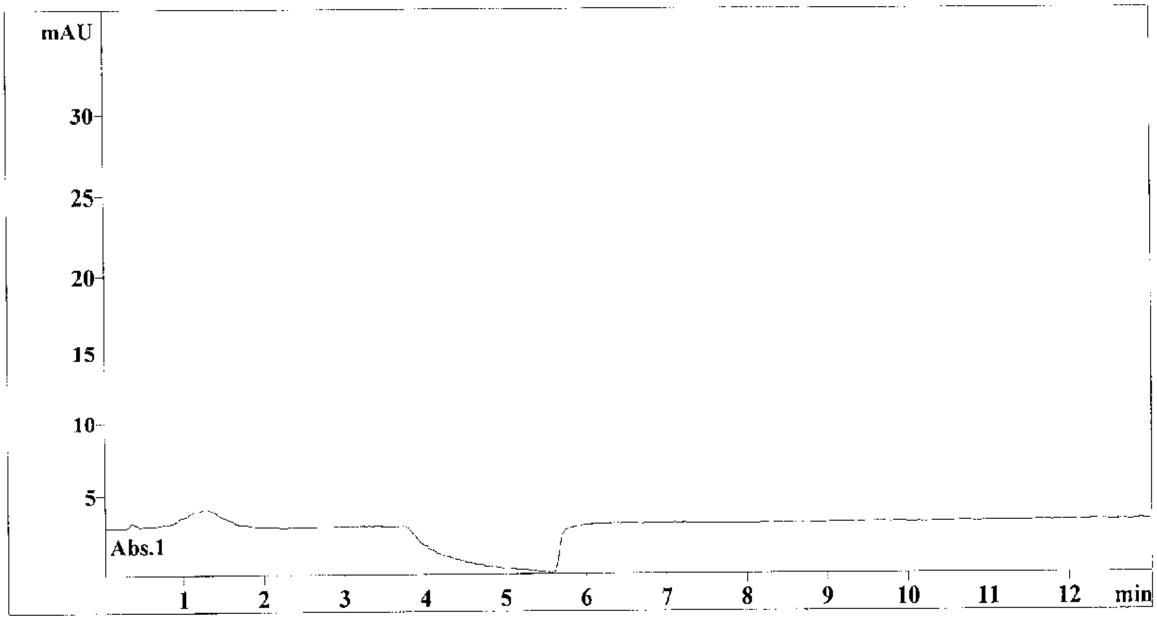
This report has been created by IC Net
METROHM LTD

Report date: 1/8/2009 12:46:26 PM
Printed by: lai

Ident: ~~2009-14G~~ 00940-7
Analysis from: 1/7/2009 9:59:32 AM
File: t1070959.chw Last save: 1/7/2009 10:12:38 AM

Method: EDTA, NTA.mtw Last save: 1/6/2009 2:15:47 PM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33586

SAMPLE:
:
Vial number: 18
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

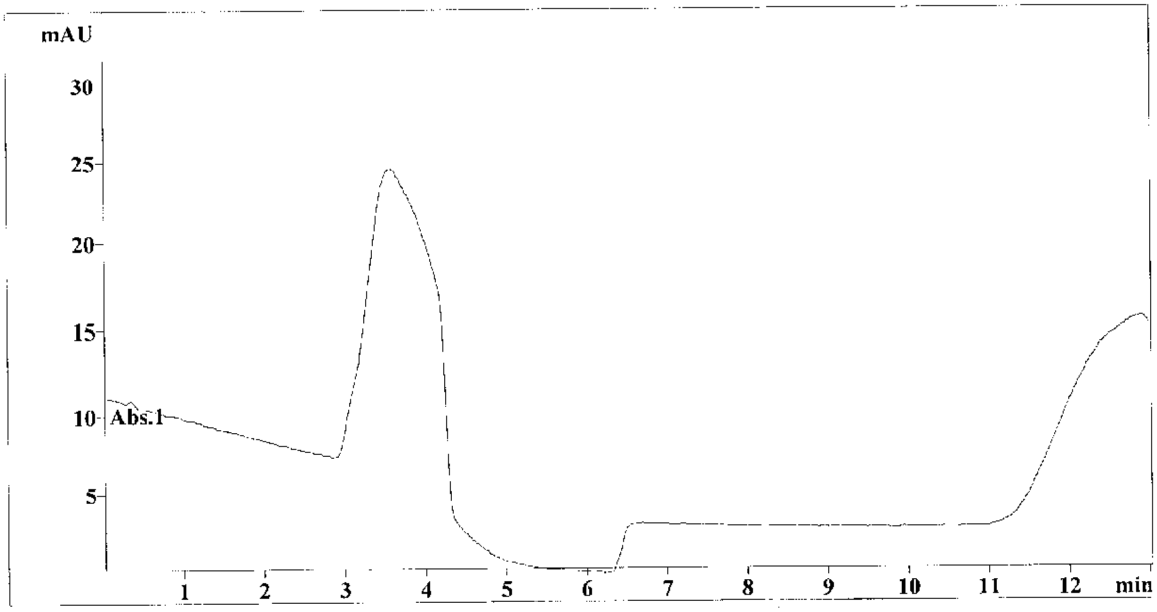
This report has been created by IC Net
METROHM LTD

Report date: 1/8/2009 12:46:31 PM
Printed by: lai

Ident: ~~2009-14H~~ 00940-8
Analysis from: 1/6/2009 7:10:26 PM
File: t1061910.chw Last save: 1/6/2009 7:23:33 PM

Method: EDTA, NTA.mtw Last save: 1/6/2009 2:15:47 PM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33572

SAMPLE:
:
Vial number: 19
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

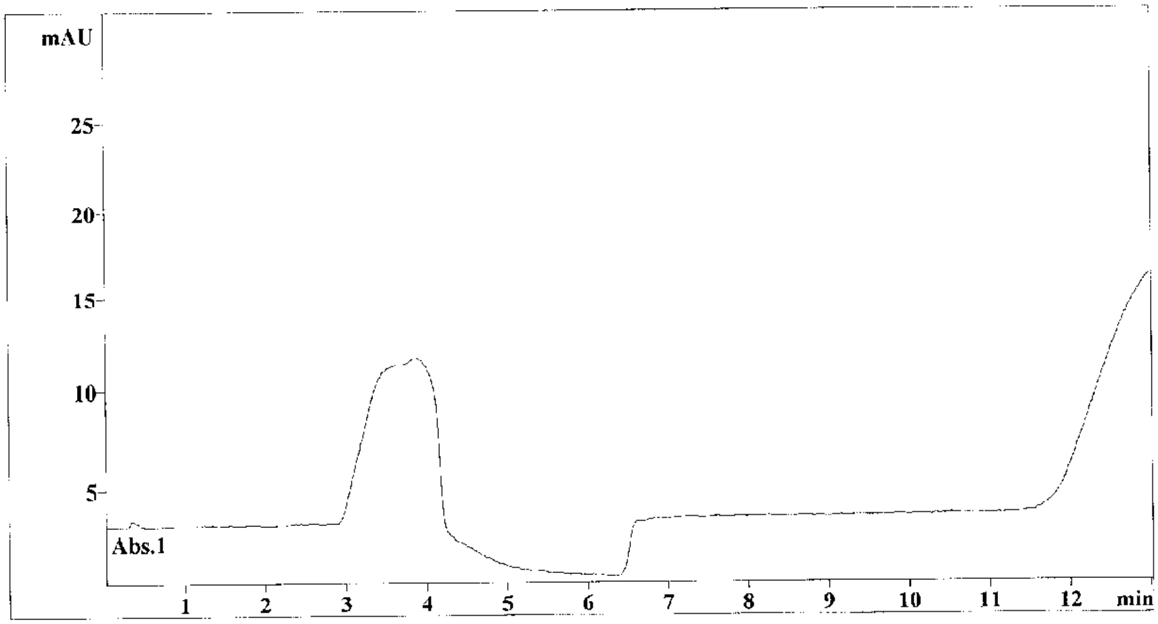
This report has been created by IC Net
METROHM LTD

Report date: 1/8/2009 12:46:34 PM
Printed by: lai

Ident: ~~2009-141~~ 00940-9
Analysis from: 1/7/2009 10:15:46 AM
File: t1071015.chw Last save: 1/7/2009 10:28:53 AM

Method: EDTA, NTA.mtw Last save: 1/6/2009 2:15:47 PM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33587

SAMPLE:
:
Vial number: 20
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

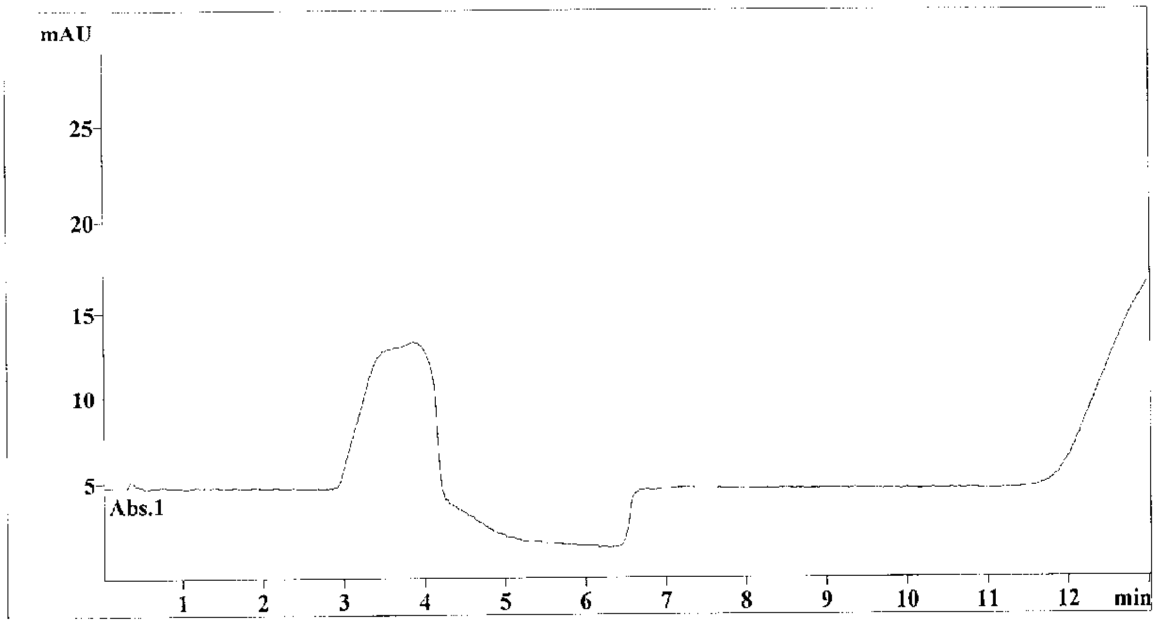
No peaks

This report has been created by IC Net
METROHM LTD

Report date: 1/8/2009 12:46:41 PM
Printed by: lai

Ident: ~~2009-141-Dup~~ 00940-9 Dup
Analysis from: 1/7/2009 11:33:34 AM
File: t1071133.chw Last save: 1/7/2009 11:46:41 AM
Modified!
Method: EDTA, NTA.mtw Last save: 1/6/2009 2:15:47 PM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33592

SAMPLE:
:
Vial number: 20
Volume: 1.0 μL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

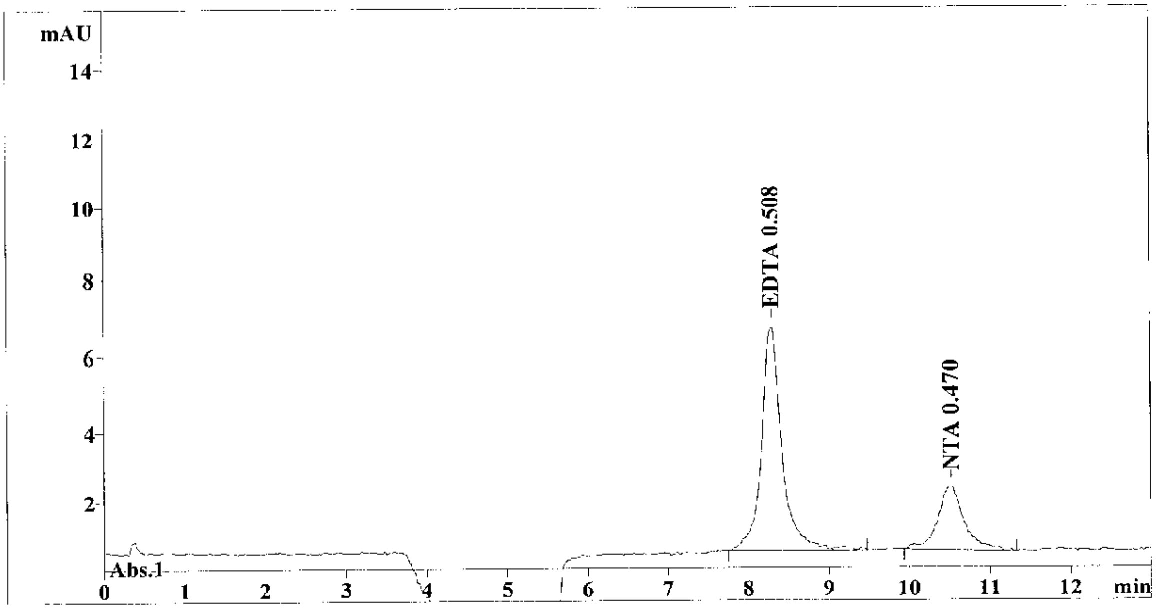
This report has been created by IC Net
METROHM LTD

Report date: 1/8/2009 12:45:27 PM
Printed by: lai

Ident: QC
Analysis from: 1/6/2009 1:19:17 PM
File: t1061319.chw Last save: 1/6/2009 2:15:47 PM

Method: EDTA, NTA.mtw Last save: 12/26/2008 10:27:53 AM
Run operator: Leigh Ann Kitsmiller
Analysis number: 33553

SAMPLE:
:
Vial number: 7
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Height mAU	Area mAU*sec	Conc. ppm	Name	QC=
1	8.30	6.16	115.022	0.508	EDTA	0.515
2	10.52	1.89	44.177	0.470	NTA	0.497
2	13.00	8.05	159.199	0.978		

This report has been created by IC Net
METROHM LTD

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 208644
ANALYTICAL REPORT

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

Project : 27011-07-4200
Location : Recycled Water Study
Level : II

Sample ID	Lab ID
MW-1	208644-001
MW-2	208644-002
MW-3	208644-003
MW-4	208644-004
L-5 COMP	208644-005
L-10 COMP	208644-006
SOURCE	208644-007
4876	208644-008
4877	208644-009

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: ______________________ Date: 01/06/2009
Project Manager

Signature: ______________________ Date: 01/06/2009
Project Manager

NELAP # 01107CA

CASE NARRATIVE

Laboratory number:	**208644**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**12/15/08**
Samples Received:	**12/15/08**

This data package contains sample and QC results for nine water samples, requested for the above referenced project on 12/15/08. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

Metals (EPA 6010B):
No analytical problems were encountered.

Ion Chromatography (EPA 300.0):
No analytical problems were encountered.

Total Cyanide (SM4500CN-E):
No analytical problems were encountered.

Alkalinity (SM2320B):
No analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):
No analytical problems were encountered.

Total Phosphorous (SM4500P-E):
No analytical problems were encountered.

Total Organic Carbon (TOC) (SM5310C):
No analytical problems were encountered.

Dissolved Organic Carbon (DOC) (SM5310C):
No analytical problems were encountered.

Surfactants (MBAS) (SM5540C):
No analytical problems were encountered.

EPA 552 (EPA 552):
Weck Laboratories, Inc. in Hacienda Heights, CA performed the analysis. Please see the Weck Laboratories, Inc. case narrative.

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14396

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ______ (SIGN)
SAMPLERS Castro/Murphy (PRINT)
______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B] Glass Liter
[✓ C] Plastic 500-ml
[✓ D] Plastic Liter
[✓ E] ~~Brass Tube~~ 250 poly
[✓ F] Other 250 Glass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 208644

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HN0$_3$	HCL	H$_2$SO$_4$	Field Filtered (check)	ANALYSIS REQUESTED: SEE NOTE 1	SEE NOTE 2	TOC	TDS	DOC	5010/8260	HAA5	Tot Phosphates		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12/15/08	1230	MW-1	19.7	860	6.50	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							F	A				1						X					1		✓				
6							A	A			3								X				1		✓	✓			
7							B	A	1											X			1		✓				
8		↓	↓	↓	↓	↓	E	A				1									X		1		✓				
9		1115	MW-2	19.3	710	6.84	D	A	1					X									1		✓				
10							C	A		1					X								1		✓				
11							F	A				1				X							1		✓				
12							E	A	1								X						1		✓				
13							F	A				1						X					1		✓				
14							A	A			3								X				1		✓	✓			
15							B	A	1											X			1		✓				
16	↓	↓	↓	↓	↓	↓	E	A				1									X		1		✓				

NOTES / MISCELLANEOUS
1. ALKALINITY/SULFATE/~~NITRATE~~/NITRITE/CHLORIDE/BROMIDE
2. BORON/CALCIUM/MAGNESIUM/SODIUM/POTASSIUM

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14-397,398,399,400,401	Thomas Murphy	12/15/08	1500	Ruby	12/15/08	1600

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14397

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ______ (SIGN)
SAMPLERS Castro / Murphy (PRINT)
______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D] Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tomkins

LABORATORY USE ONLY

LAB PROJECT NO. 208644

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HN0$_3$	HCL	NaOH	Field Filtered (check)	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12/15/08	1230	MW-1	19.7	860	6.80	D	A	1					X		1		✓				
2		1115	MW-2	19.3	710	6.84	D	A	1					X		1		✓				
3		845	MW-3	17.1	909	6.86	D	A	1					X		1		✓				
4		940	MW-4	18.1	946	6.87	D	A	1					X		1		✓				
5		900	L-5 COMP	12.4	2146	7.66	D	A	1					X		1		✓				
6		1000	L-10 COMP	13.6	1655	7.84	D	A	1					X		1		✓				
7		1000	SOURCE	10.9	1156	7.65	D	A	1					X		1		✓				
8		—	4876	—	—	—	D	A	1					X		1		✓				
9		—	4877	—	—	—	D	H	1					X		1		✓				
10		1000	Source	10.9	1156	7.65	C	A	[illegible]			1			X	1						
11		—	4876	—	—	—	C	A				1			X	1						
12		—	4577	—	—	—	C	H				1			X	1						
13																						
14																						
15																						
16																						

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14-396, 398, 399, 400, 401	Thomas Murphy	12/15/08	1500		12/15/08	1500

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below)

Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14398

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ______ (SIGN)
SAMPLERS CASTRO / MURPHY (PRINT)
______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
(A) 40-ml VOA Vial
(B) Glass Liter
(C) Plastic 500-ml
(D) Plastic Liter
(E) ~~Brass Tube~~ 250 poly
(F) Other 250 glass

SAMPLE DESCRIPTION CODES
(A) Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
(1) Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB CURTIS & TOMPKINS

LABORATORY USE ONLY
LAB PROJECT NO. 208614

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Number of Containers and Preservation: Unpreserved	HNO$_3$	HCL	H_2SO_4	Field Filtered (check)	Analysis Requested: SEE NOTE 1	SEE NOTE 2	TOC	TDS	DOC	8010/8020	HAA6	Tot Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12/15/08	845	MW-3	17.1	909	6.56	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							F	A				1						X					1		✓				
6							A	A			3								X				1		✓	✓			
7							B	A	1											X			1		✓				
8		↓	↓	↓	↓	↓	E	A				1									X		1		✓				
9		940	MW-4	18.1	946	6.57	D	A	1					X									1		✓				
10							C	A		1					X								1		✓				
11							F	A				1				X							1		✓				
12							E	A	1								X						1		✓				
13							F	A				1						X					1		✓				
14							A	A			3								X				1		✓	✓			
15							B	A	1											X			1		✓				
16	↓	↓	↓	↓	↓	↓	E	A				1									X		1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity / Sulfate / Nitrate / Nitrite / Chloride / Bromide
2. Boron / Calcium / Magnesium / Sodium / Potassium

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	14-396,397,399,400,401	Thomas Murphy	12/15/08	1500		12/15/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14399

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ____________ (SIGN)
SAMPLERS Castro/Murphy (PRINT)
____________ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E. ~~Brass Tube~~ 250 poly]
[✓ F. Other 250 Glass]

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 208644

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HN0$_3$	HCL	H2SO4	Field Filtered (check)	See Note 1	See Note 2	TOC	TDS	DOC	8011/8020	HAA6	Tot Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12/15/08	900	L-5 COMP	12.4	2146	7.66	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							F	A				1						X					1		✓				
6							A	A			3								X				1		✓	✓			
7							B	A	1											X			1		✓				
8							E	A				1									X		1		✓				
9		1000	L-10 COMP	13.6	1655	7.84	D	A	1					X									1		✓				
10							C	A		1					X								1		✓				
11							F	A				1				X							1		✓				
12							E	A	1								X						1		✓				
13							F	A				1						X					1		✓				
14							A	A			3								X				1		✓	✓			
15							B	A	1											X			1		✓				
16							E	A				1									X		1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity/Sulfate/Nitrate/Nitrite/Chloride/Bromide
2. Boron/Calcium/Magnesium/Sodium/Potasium

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14-396,397,398,400,401	Thomas Murphy	12/15/08	1500		12/15/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ OTHER ____________ TEL ________ FAX ________

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14400

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER
(SIGN)

SAMPLERS Castro/Murphy
(PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- [✓ A.] 40-ml VOA Vial
- [✓ B.] Glass Liter
- [✓ C.] Plastic 500-ml
- [✓ D.] Plastic Liter
- [✓ E.] ~~Brass Tube~~ 250 poly
- [✓ F.] Other 250 Glass

SAMPLE DESCRIPTION CODES
- [✓ A.] Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other

TAT CODES
- [✓ 1.] Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 208644

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HN0$_3$	HCL	H$_2$SO$_4$	Field Filtered (check)	See Note 1	See Note 2	TOC	TDS	DOC	8010/8020	HAAs	Tot Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12/15/08	1000	Source	10.9	1156	7.65	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	F	A				1						X					1		✓				
6	↓	↓	↓	↓	↓	↓	A	A			3								X				1		✓	✓			
7	↓	↓	↓	↓	↓	↓	B	A	1											X			1		✓				
8	↓	↓	↓	↓	↓	↓	E	A				1									X		1		✓				
9	↓	—	4876	—	—	—	D	A	1					X									1		✓				
10	↓	—	↓	—	—	—	C	A		1					X								1		✓				
11	↓	—	↓	—	—	—	F	A				1				X							1		✓				
12	↓	—	↓	—	—	—	E	A	1								X						1		✓				
13	↓	—	↓	—	—	—	F	A				1						X					1		✓				
14	↓	—	↓	—	—	—	A	A			3								X				1		✓	✓			
15	↓	—	↓	—	—	—	B	A	1											X			1		✓				
16	↓	—	↓	—	—	—	E	A				1									X		1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity/Sulfate/Nitrate/Nitrite/Chloride/Bromide
2. Boron/Calcium/Magnesium/Sodium/Potasium

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14-396,397,398,399,401	Thomas Murphy	12/15/08	1500		12/15/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14401

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ______ (SIGN)
SAMPLERS Castro/Murphy (PRINT)
______ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D] Plastic Liter
[✓ E] ~~Brass Tube~~ 250 Poly
[✓ F] Other 250 Glass

SAMPLE DESCRIPTION CODES
A. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 204644

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HN0$_3$	HCL	H2SO4	Field Filtered (check)	ANALYSIS REQUESTED: See note 1	See note 2	TOC	TDS	DOC	5010/5030	HAA6	Tot Phosphate	Temperature	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12/15/08	—	4877	—	—	—	D	H	1					X									1		✓				
2	↓	—	↓	—	—	—	C	H		1					X								1		✓				
3	↓	—	↓	—	—	—	F	H								X							1		✓				
4	↓	—	↓	—	—	—	E	H	1								X						1		✓				
5	↓	—	↓	—	—	—	F	H										X					1		✓				
6	↓	—	↓	—	—	—	A	H			3								X				1		✓	✓			
7	↓	—	↓	—	—	—	B	H	1											X			1		✓				
8	↓	—	↓	—	—	—	E	H				1									X		1		✓				
9	↓	—	Temp Blank	—	—	—	A	H	1													X	1	*	✓		*		
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity/Sulfate/Nitrate/Nitrite/Chloride/Bromide
2. Boron/Calcium/Magnesium/Sodium/Potasium
*Temp. to be measured & recorded upon receipt of samples at lab 4°C

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14-396,397,398,399,400	Murphy	12/15/08	1500		12/15/08	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 208644 Date Received 12/15/8 Number of coolers 4
Client LOCUS Project RECYLED WATER SUPPLY

Date Opened 12/15/8 By (print) S. EVANS (sign)
Date Logged in By (print) (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES [✓ NO]
Shipping info

2A. Were custody seals present? ☒ YES (circle) [✓ on cooler] on samples ☐ NO
How many 1 PER Name Tom M. Date 12/15/08
2B. Were custody seals intact upon arrival? [✓ YES] NO N/A
3. Were custody papers dry and intact when received? [✓ YES] NO
4. Were custody papers filled out properly (ink, signed, etc)? [✓ YES] NO
5. Is the project identifiable from custody papers? (If so fill out top of form) [✓ YES] NO
6. Indicate the packing in cooler: (if other, describe)

☒ Bubble Wrap
☐ Cloth material
☐ Foam blocks
☐ Cardboard
☒ Bags
☐ Styrofoam
☐ None
☐ Paper towels

7. Temperature documentation:

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 4

☐ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES [✓ NO]
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? [✓ YES] NO
10. Are samples in the appropriate containers for indicated tests? [✓ YES] NO
11. Are sample labels present, in good condition and complete? [✓ YES] NO
12. Do the sample labels agree with custody papers? [✓ YES] NO
13. Was sufficient amount of sample sent for tests requested? [✓ YES] NO
14. Are the samples appropriately preserved? [✓ YES] NO N/A
15. Are bubbles > 6mm absent in VOA samples? [✓ YES] NO N/A
16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1

Rev. 6 Number 1 of 3
Effective: 23 July 2008
Z:\qc\forms\checklists\Cooler Receipt Checklist_rv6.doc

Anna Pajarillo

From: "Wong, Norman" <Wongn@locustec.com>
To: "Anna M. Pajarillo" <anna@ctberk.com>
Sent: Tuesday, December 16, 2008 11:43 AM
Subject: cancel bromide

Hi Anna,

The courier just picked up some samples yesterday. There is one analyte I want to have canceled on the COC and that is bromide by EPA 300.0. There are other analytes by EPA 300.0 which I want to keep. This project is for the recycled water study.

Norman Wong, Assistant Project Engineer
Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
tel: (650) 641 - 8258
fax: (650) 960 - 0739
wongn@locustec.com

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	146246
Lab ID:	208644-001	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	1.4	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	102	80-120
Toluene-d8	105	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	146246
Lab ID:	208644-002	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	1.4	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	97	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	146246
Lab ID:	208644-003	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	2.0	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	146297
Lab ID:	208644-004	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	1.4	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	102	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	98	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-5 COMP	Batch#:	146297
Lab ID:	208644-005	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	**Result**	**RL**
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	109	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-10 COMP	Batch#:	146297
Lab ID:	208644-006	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	146297
Lab ID:	208644-007	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	8.6	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	8.4	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	4.6	0.5
Chlorobenzene	ND	0.5
Bromoform	1.2	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	4876	Batch#:	146297
Lab ID:	208644-008	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	8.7	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	8.4	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	4.9	0.5
Chlorobenzene	ND	0.5
Bromoform	1.2	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	4877	Batch#:	146297
Lab ID:	208644-009	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	102	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC476493	Batch#:	146246
Matrix:	Water	Analyzed:	12/19/08
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC476494	Batch#:	146246
Matrix:	Water	Analyzed:	12/19/08
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	108	80-120

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC476705	Batch#:	146297
Matrix:	Water	Analyzed:	12/20/08
Units:	ug/L		

Analyte	**Result**	**RL**
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	101	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC476492	Batch#:	146246
Matrix:	Water	Analyzed:	12/19/08
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	21.38	107	80-120
Trichloroethene	20.00	21.00	105	80-120
Chlorobenzene	20.00	19.29	96	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	80-120
Toluene-d8	109	80-120
Bromofluorobenzene	104	80-120

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	146246
MSS Lab ID:	208699-004	Sampled:	12/16/08
Matrix:	Water	Received:	12/16/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Type:	MS	Lab ID:	QC476516

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1391	20.00	23.34	117	40-150
Trichloroethene	0.5644	20.00	21.58	105	40-150
Chlorobenzene	<0.1000	20.00	20.19	101	40-150

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	94	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	103	80-120

Type:	MSD	Lab ID:	QC476517

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	21.88	109	40-150	6	35
Trichloroethene	20.00	21.22	103	40-150	2	35
Chlorobenzene	20.00	18.33	92	40-150	10	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	98	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	146297
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Type: BS Lab ID: QC476703

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	20.77	104	80-120
Trichloroethene	20.00	19.25	96	80-120
Chlorobenzene	20.00	18.94	95	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-120

Type: BSD Lab ID: QC476704

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	20.65	103	80-120	1	35
Trichloroethene	20.00	19.11	96	80-120	1	35
Chlorobenzene	20.00	16.95	85	80-120	11	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-120

RPD= Relative Percent Difference

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	146246
Lab ID:	208644-001	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	102	80-120
Toluene-d8	105	80-120
Bromofluorobenzene	99	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	146246
Lab ID:	208644-002	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	97	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	146246
Lab ID:	208644-003	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	104	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	146297
Lab ID:	208644-004	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	102	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	98	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-5 COMP	Batch#:	146297
Lab ID:	208644-005	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	109	80-120
Bromofluorobenzene	99	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-10 COMP	Batch#:	146297
Lab ID:	208644-006	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	101	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	146297
Lab ID:	208644-007	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	96	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	4876	Batch#:	146297
Lab ID:	208644-008	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	4877	Batch#:	146297
Lab ID:	208644-009	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	102	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC476493	Batch#:	146246
Matrix:	Water	Analyzed:	12/19/08
Units:	ug/L		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC476494	Batch#:	146246
Matrix:	Water	Analyzed:	12/19/08
Units:	ug/L		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	108	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC476705	Batch#:	146297
Matrix:	Water	Analyzed:	12/20/08
Units:	ug/L		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	104	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC476492	Batch#:	146246
Matrix:	Water	Analyzed:	12/19/08
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Benzene	20.00	20.44	102	80-120
Toluene	20.00	21.81	109	80-120
Chlorobenzene	20.00	19.29	96	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	101	80-120
Toluene-d8	109	80-120
Bromofluorobenzene	104	80-122

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	146246
MSS Lab ID:	208699-004	Sampled:	12/16/08
Matrix:	Water	Received:	12/16/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Type: MS Lab ID: QC476516

Analyte	MSS Result	Spiked	Result	%REC	Limits
Benzene	<0.1000	20.00	20.09	100	40-150
Toluene	<0.1116	20.00	21.13	106	40-150
Chlorobenzene	<0.1000	20.00	20.19	101	40-150

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	94	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	103	80-122

Type: MSD Lab ID: QC476517

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	20.00	20.57	103	40-150	2	35
Toluene	20.00	21.03	105	40-150	0	35
Chlorobenzene	20.00	18.33	92	40-150	10	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	98	80-122

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	146297
Units:	ug/L	Analyzed:	12/20/08
Diln Fac:	1.000		

Type: BS

Lab ID: QC476703

Analyte	**Spiked**	**Result**	**%REC**	**Limits**
Benzene	20.00	18.70	94	80-120
Toluene	20.00	19.95	100	80-120
Chlorobenzene	20.00	18.94	95	80-120

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	99	80-122

Type: BSD

Lab ID: QC476704

Analyte	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**
Benzene	20.00	19.26	96	80-120	3	35
Toluene	20.00	18.26	91	80-120	9	35
Chlorobenzene	20.00	16.95	85	80-120	11	35

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	102	80-122

RPD= Relative Percent Difference

Boron

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Prepared:	12/16/08
Diln Fac:	1.000	Analyzed:	12/19/08
Batch#:	146080		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	208644-001	180	100
MW-2	SAMPLE	208644-002	150	100
MW-3	SAMPLE	208644-003	190	100
MW-4	SAMPLE	208644-004	210	100
L-5 COMP	SAMPLE	208644-005	340	100
L-10 COMP	SAMPLE	208644-006	300	100
SOURCE	SAMPLE	208644-007	440	100
4876	SAMPLE	208644-008	410	100
4877	SAMPLE	208644-009	ND	100
	BLANK	QC475761	ND	100

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Boron

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Batch#:	146080
Field ID:	ZZZZZZZZZZ	Sampled:	12/15/08
MSS Lab ID:	208636-001	Received:	12/15/08
Matrix:	Water	Prepared:	12/16/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC475762		1,000	1,025	103	80-120		
BSD	QC475763		1,000	1,018	102	80-120	1	20
MS	QC475764	2,066	1,000	3,165	110	79-121		
MSD	QC475765		1,000	3,170	110	79-121	0	20

RPD= Relative Percent Difference

Calcium

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Prepared:	12/16/08
Batch#:	146080	Analyzed:	12/19/08

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	208644-001	68,000	500	1.000
MW-2	SAMPLE	208644-002	63,000	500	1.000
MW-3	SAMPLE	208644-003	85,000	500	1.000
MW-4	SAMPLE	208644-004	91,000	500	1.000
L-5 COMP	SAMPLE	208644-005	180,000	3,300	10.00
L-10 COMP	SAMPLE	208644-006	150,000	3,300	10.00
SOURCE	SAMPLE	208644-007	51,000	500	1.000
4876	SAMPLE	208644-008	47,000	500	1.000
4877	SAMPLE	208644-009	ND	500	1.000
	BLANK	QC475761	ND	500	1.000

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Calcium

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Batch#:	146080
Field ID:	ZZZZZZZZZZ	Sampled:	12/15/08
MSS Lab ID:	208636-001	Received:	12/15/08
Matrix:	Water	Prepared:	12/16/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC475762		20,000	18,970	95	80-120		
BSD	QC475763		20,000	19,010	95	80-120	0	20
MS	QC475764	33,490	20,000	49,010	78	63-130		
MSD	QC475765		20,000	55,490	110	63-130	12	20

RPD= Relative Percent Difference

Potassium

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Prepared:	12/16/08
Diln Fac:	1.000	Analyzed:	12/19/08
Batch#:	146080		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	208644-001	950	500
MW-2	SAMPLE	208644-002	650	500
MW-3	SAMPLE	208644-003	510	500
MW-4	SAMPLE	208644-004	510	500
L-5 COMP	SAMPLE	208644-005	5,400	500
L-10 COMP	SAMPLE	208644-006	2,300	500
SOURCE	SAMPLE	208644-007	14,000	500
4876	SAMPLE	208644-008	13,000	500
4877	SAMPLE	208644-009	ND	500
	BLANK	QC475761	ND	500

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Potassium

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Batch#:	146080
Field ID:	ZZZZZZZZZZ	Sampled:	12/15/08
MSS Lab ID:	208636-001	Received:	12/15/08
Matrix:	Water	Prepared:	12/16/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC475762		10,000	9,173	92	80-120		
BSD	QC475763		10,000	9,164	92	80-120	0	20
MS	QC475764	13,490	10,000	21,640	82	68-125		
MSD	QC475765		10,000	24,490	110	68-125	12	20

RPD= Relative Percent Difference

Magnesium

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Prepared:	12/16/08
Batch#:	146080	Analyzed:	12/19/08

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	208644-001	43,000	500	1.000
MW-2	SAMPLE	208644-002	35,000	500	1.000
MW-3	SAMPLE	208644-003	51,000	500	1.000
MW-4	SAMPLE	208644-004	51,000	500	1.000
L-5 COMP	SAMPLE	208644-005	81,000	500	1.000
L-10 COMP	SAMPLE	208644-006	110,000	3,300	10.00
SOURCE	SAMPLE	208644-007	26,000	500	1.000
4876	SAMPLE	208644-008	24,000	500	1.000
4877	SAMPLE	208644-009	ND	500	1.000
	BLANK	QC475761	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Magnesium

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Batch#:	146080
Field ID:	ZZZZZZZZZZ	Sampled:	12/15/08
MSS Lab ID:	208636-001	Received:	12/15/08
Matrix:	Water	Prepared:	12/16/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC475762		20,000	19,070	95	80-120		
BSD	QC475763		20,000	19,170	96	80-120	1	20
MS	QC475764	13,750	20,000	30,430	83	66-126		
MSD	QC475765		20,000	34,150	102	66-126	12	20

RPD= Relative Percent Difference

Sodium

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	ug/L	Prepared:	12/16/08
Batch#:	146080	Analyzed:	12/19/08

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	208644-001	35,000	500	1.000
MW-2	SAMPLE	208644-002	29,000	500	1.000
MW-3	SAMPLE	208644-003	36,000	500	1.000
MW-4	SAMPLE	208644-004	38,000	500	1.000
L-5 COMP	SAMPLE	208644-005	200,000	5,000	10.00
L-10 COMP	SAMPLE	208644-006	78,000	500	1.000
SOURCE	SAMPLE	208644-007	130,000	5,000	10.00
4876	SAMPLE	208644-008	120,000	5,000	10.00
4877	SAMPLE	208644-009	ND	500	1.000
	BLANK	QC475761	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Sodium

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Batch#:	146080
Field ID:	ZZZZZZZZZZ	Sampled:	12/15/08
MSS Lab ID:	208636-001	Received:	12/15/08
Matrix:	Water	Prepared:	12/16/08
Units:	ug/L	Analyzed:	12/19/08
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC475762		20,000	18,870	94	80-120		
BSD	QC475763		20,000	18,560	93	80-120	2	20
MS	QC475764	50,360	20,000	65,930	78	60-131		
MSD	QC475765		20,000	74,480	121	60-131	12	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	146028
Units:	mg/L	Received:	12/15/08

Field ID: MW-1 Lab ID: 208644-001
Type: SAMPLE Sampled: 12/15/08 12:30

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	49	1.0	5.000	12/16/08 11:49
Nitrogen, Nitrite	0.15	0.05	1.000	12/16/08 14:41
Nitrogen, Nitrate	2.7	0.05	1.000	12/16/08 14:41
Sulfate	60	2.5	5.000	12/16/08 11:49

Field ID: MW-2 Lab ID: 208644-002
Type: SAMPLE Sampled: 12/15/08 11:15

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	34	1.0	5.000	12/16/08 12:07
Nitrogen, Nitrite	ND	0.05	1.000	12/16/08 16:31
Nitrogen, Nitrate	3.5	0.05	1.000	12/16/08 16:31
Sulfate	46	0.50	1.000	12/16/08 16:31

Field ID: MW-3 Lab ID: 208644-003
Type: SAMPLE Sampled: 12/15/08 08:45

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	48	2.0	10.00	12/16/08 12:24
Nitrogen, Nitrite	ND	0.05	1.000	12/16/08 16:49
Nitrogen, Nitrate	2.2	0.05	1.000	12/16/08 16:49
Sulfate	54	1.0	2.000	12/17/08 07:18

Field ID: MW-4 Lab ID: 208644-004
Type: SAMPLE Sampled: 12/15/08 09:40

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	42	2.0	10.00	12/16/08 12:42
Nitrogen, Nitrite	ND	0.05	1.000	12/16/08 17:06
Nitrogen, Nitrate	2.5	0.05	1.000	12/16/08 17:06
Sulfate	62	1.0	2.000	12/17/08 07:36

Field ID: L-5 COMP Lab ID: 208644-005
Type: SAMPLE Sampled: 12/15/08 09:00

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	86	5.0	25.00	12/16/08 12:59
Nitrogen, Nitrite	ND	0.10	2.000	12/16/08 17:23
Nitrogen, Nitrate	ND	0.10	2.000	12/16/08 17:23
Sulfate	660	13	25.00	12/16/08 12:59

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	146028
Units:	mg/L	Received:	12/15/08

Field ID:	L-10 COMP	Lab ID:	208644-006
Type:	SAMPLE	Sampled:	12/15/08 10:00

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	72	2.0	10.00	12/16/08 13:16
Nitrogen, Nitrite	ND	0.05	1.000	12/16/08 20:51
Nitrogen, Nitrate	1.7	0.05	1.000	12/16/08 20:51
Sulfate	270	5.0	10.00	12/16/08 13:16

Field ID:	SOURCE	Lab ID:	208644-007
Type:	SAMPLE	Sampled:	12/15/08 10:00

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	200	2.0	10.00	12/16/08 13:34
Nitrogen, Nitrite	0.14	0.05	1.000	12/16/08 21:44
Nitrogen, Nitrate	10	0.50	10.00	12/16/08 13:34
Sulfate	89	5.0	10.00	12/16/08 13:34

Field ID:	4876	Lab ID:	208644-008
Type:	SAMPLE	Sampled:	12/15/08

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	200	4.0	20.00	12/17/08 08:28
Nitrogen, Nitrite	0.13	0.05	1.000	12/16/08 22:18
Nitrogen, Nitrate	10	0.50	10.00	12/16/08 13:51
Sulfate	89	5.0	10.00	12/16/08 13:51

Field ID:	4877	Diln Fac:	1.000
Type:	SAMPLE	Sampled:	12/15/08
Lab ID:	208644-009	Analyzed:	12/16/08 14:09

Analyte	Result	RL
Chloride	ND	0.20
Nitrogen, Nitrite	ND	0.05
Nitrogen, Nitrate	ND	0.05
Sulfate	ND	0.50

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC475502	Analyzed:	12/16/08 09:27

Analyte	Result	RL
Chloride	ND	0.20
Nitrogen, Nitrite	ND	0.05
Nitrogen, Nitrate	ND	0.05
Sulfate	ND	0.50

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Diln Fac:	1.000
Units:	mg/L	Batch#:	146028

Type:	BS	Analyzed:	12/16/08 09:45
Lab ID:	QC475503		

Analyte	Spiked	Result	%REC	Limits
Chloride	4.000	3.819	95	80-120
Nitrogen, Nitrite	1.000	0.9597	96	80-120
Nitrogen, Nitrate	1.000	0.9536	95	80-120
Sulfate	10.00	9.553	96	80-120

Type:	BSD	Analyzed:	12/16/08 10:02
Lab ID:	QC475504		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	4.000	3.857	96	80-120	1	20
Nitrogen, Nitrite	1.000	0.9550	95	80-120	0	20
Nitrogen, Nitrate	1.000	0.9596	96	80-120	1	20
Sulfate	10.00	9.590	96	80-120	0	20

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Field ID:	ZZZZZZZZZZ	Diln Fac:	5.000
MSS Lab ID:	208640-001	Batch#:	146028
Matrix:	Water	Sampled:	12/15/08 17:00
Units:	mg/L	Received:	12/15/08

Type: MS Analyzed: 12/17/08 04:41
Lab ID: QC475505

Analyte	MSS Result	Spiked	Result	%REC	Limits
Chloride	13.52	10.00	23.01	95	80-120
Nitrogen, Nitrite	0.08733	2.500	2.482	96	80-120
Nitrogen, Nitrate	0.4699	2.500	2.885	97	80-120
Sulfate	13.11	25.00	37.70	98	80-120

Type: MSD Analyzed: 12/17/08 04:59
Lab ID: QC475506

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	10.00	22.89	94	80-120	1	20
Nitrogen, Nitrite	2.500	2.462	95	80-120	1	20
Nitrogen, Nitrate	2.500	2.858	96	80-120	1	20
Sulfate	25.00	37.52	98	80-120	0	20

RPD= Relative Percent Difference

Alkalinity

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	12/15/08
Units:	mg/L	Received:	12/15/08
Batch#:	146276	Analyzed:	12/19/08

Field ID: MW-1
Type: SAMPLE
Lab ID: 208644-001
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	300	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	300	6.7

Field ID: MW-2
Type: SAMPLE
Lab ID: 208644-002
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	410	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	410	6.7

Field ID: MW-3
Type: SAMPLE
Lab ID: 208644-003
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	400	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	400	6.7

Field ID: MW-4
Type: SAMPLE
Lab ID: 208644-004
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	410	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	410	6.7

Field ID: L-5 COMP
Type: SAMPLE
Lab ID: 208644-005
Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	590	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	590	6.7

ND= Not Detected
RL= Reporting Limit

Alkalinity

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	12/15/08
Units:	mg/L	Received:	12/15/08
Batch#:	146276	Analyzed:	12/19/08

Field ID: L-10 COMP   Lab ID: 208644-006
Type: SAMPLE   Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	710	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	710	6.7

Field ID: SOURCE   Lab ID: 208644-007
Type: SAMPLE   Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	170	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	170	6.7

Field ID: 4876   Lab ID: 208644-008
Type: SAMPLE   Diln Fac: 4.000

Analyte	Result	RL
Alkalinity, Bicarbonate	170	4.0
Alkalinity, Carbonate	ND	4.0
Alkalinity, Hydroxide	ND	4.0
Alkalinity, Total as CaCO3	170	4.0

Field ID: 4877   Lab ID: 208644-009
Type: SAMPLE   Diln Fac: 1.000

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	ND	1.0

Type: BLANK   Diln Fac: 1.000
Lab ID: QC476612

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Alkalinity

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Units:	mg/L
Type:	LCS	Diln Fac:	4.000
Lab ID:	QC476613	Batch#:	146276
Matrix:	Water	Analyzed:	12/19/08

Spiked	Result	%REC	Limits
200.0	194.0	97	90-110

Batch QC Report

Alkalinity

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Diln Fac:	4.000
Field ID:	4877	Batch#:	146276
MSS Lab ID:	208644-009	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	mg/L	Analyzed:	12/19/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC476614	<1.000	200.0	198.0	99	80-120		
MSD	QC476615		200.0	196.8	98	80-120	1	25

RPD= Relative Percent Difference

Total Cyanide

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	146328
Matrix:	Water	Sampled:	12/15/08
Units:	mg/L	Received:	12/15/08
Diln Fac:	1.000	Analyzed:	12/22/08

Field ID	Type	Lab ID	Result	RL
SOURCE	SAMPLE	208644-007	ND	0.01
4876	SAMPLE	208644-008	ND	0.01
4877	SAMPLE	208644-009	ND	0.01
	BLANK	QC476801	ND	0.01

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Cyanide

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	SOURCE	Batch#:	146328
MSS Lab ID:	208644-007	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	mg/L	Analyzed:	12/22/08

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC476802		0.2000	0.1756	88	80-124		
MS	QC476803	<0.01000	0.2000	0.1924	96	67-124		
MSD	QC476804		0.2000	0.1795	90	67-124	7	20

RPD= Relative Percent Difference

Dissolved Organic Carbon (DOC)

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Batch#:	146215
Matrix:	Water	Sampled:	12/15/08
Units:	mg/L	Received:	12/15/08

Field ID	Type	Lab ID	Result	RL	Diln Fac	Analyzed
MW-1	SAMPLE	208644-001	ND	1.0	1.000	12/19/08
MW-2	SAMPLE	208644-002	ND	1.0	1.000	12/18/08
MW-3	SAMPLE	208644-003	ND	1.0	1.000	12/18/08
MW-4	SAMPLE	208644-004	ND	1.0	1.000	12/19/08
L-5 COMP	SAMPLE	208644-005	11	2.0	2.000	12/18/08
L-10 COMP	SAMPLE	208644-006	5.0	1.0	1.000	12/19/08
SOURCE	SAMPLE	208644-007	6.2	1.0	1.000	12/19/08
4876	SAMPLE	208644-008	6.1	1.0	1.000	12/19/08
4877	SAMPLE	208644-009	1.7	1.0	1.000	12/19/08
	BLANK	QC476361	ND	1.0	1.000	12/18/08

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Dissolved Organic Carbon (DOC)

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Diln Fac:	1.000
Field ID:	MW-1	Batch#:	146215
MSS Lab ID:	208644-001	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	mg/L	Analyzed:	12/18/08

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**
LCS	QC476362		10.00	10.22	102	90-110		
MS	QC476363	0.7074	2.000	2.816	105	80-121		
MSD	QC476364		2.000	2.891	109	80-121	3	20

RPD= Relative Percent Difference

Surfactants (MBAS)

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	146113
Matrix:	Water	Received:	12/15/08
Units:	mg/L	Prepared:	12/17/08 08:20
Diln Fac:	1.000	Analyzed:	12/23/08 15:41

Field ID	Type	Lab ID	Result	RL	Sampled
MW-1	SAMPLE	208644-001	ND	0.20	12/15/08 12:30
MW-2	SAMPLE	208644-002	ND	0.20	12/15/08 11:15
MW-3	SAMPLE	208644-003	ND	0.20	12/15/08 08:45
MW-4	SAMPLE	208644-004	ND	0.20	12/15/08 09:40
L-5 COMP	SAMPLE	208644-005	ND	0.20	12/15/08 09:00
L-10 COMP	SAMPLE	208644-006	ND	0.20	12/15/08 10:00
SOURCE	SAMPLE	208644-007	ND	0.20	12/15/08 10:00
4876	SAMPLE	208644-008	ND	0.20	12/15/08
4877	SAMPLE	208644-009	ND	0.20	12/15/08
	BLANK	QC475933	ND	0.20	

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Surfactants (MBAS)

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	146113
Field ID:	MW-1	Sampled:	12/15/08 12:30
MSS Lab ID:	208644-001	Received:	12/15/08
Matrix:	Water	Prepared:	12/17/08 08:20
Units:	mg/L	Analyzed:	12/23/08 15:41
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
LCS	QC475934		0.3000	0.2779		93	80-120		
SDUP	QC475935	<0.2000		<0.2000	0.2000			NC	30

NC= Not Calculated
RL= Reporting Limit
RPD= Relative Percent Difference

Total Phosphorous

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	mg/L	Analyzed:	12/19/08
Batch#:	146252		

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	208644-001	0.060	0.030	1.000
MW-2	SAMPLE	208644-002	0.098	0.030	1.000
MW-3	SAMPLE	208644-003	0.086	0.030	1.000
MW-4	SAMPLE	208644-004	0.12	0.030	1.000
L-5 COMP	SAMPLE	208644-005	0.045	0.030	1.000
L-10 COMP	SAMPLE	208644-006	0.042	0.030	1.000
SOURCE	SAMPLE	208644-007	0.26	0.075	2.500
4876	SAMPLE	208644-008	0.25	0.075	2.500
4877	SAMPLE	208644-009	ND	0.030	1.000
	BLANK	QC476518	ND	0.030	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Phosphorous

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	146252
MSS Lab ID:	208555-001	Sampled:	12/11/08
Matrix:	Water	Received:	12/12/08
Units:	mg/L	Analyzed:	12/19/08

Type	Lab ID	MSS Result	Spiked	Result	%REC		Limits	RPD	Lim
LCS	QC476519		0.3960	0.4057	102		72-134		
MS	QC476520	7.253	0.3960	7.731	121	NM	19-182		
MSD	QC476521		0.3960	7.745	124	NM	19-182	0	26

NM= Not Meaningful: Sample concentration > 4X spike concentration

RPD= Relative Percent Difference

Total Dissolved Solids (TDS)

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Sampled:	12/15/08
Matrix:	Water	Received:	12/15/08
Units:	mg/L	Prepared:	12/17/08
Batch#:	146162	Analyzed:	12/18/08

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	208644-001	490	10	1.000
MW-2	SAMPLE	208644-002	440	10	1.000
MW-3	SAMPLE	208644-003	560	10	1.000
MW-4	SAMPLE	208644-004	560	10	1.000
L-5 COMP	SAMPLE	208644-005	1,750	11	1.111
L-10 COMP	SAMPLE	208644-006	1,160	11	1.111
SOURCE	SAMPLE	208644-007	700	11	1.111
4876	SAMPLE	208644-008	700	11	1.111
4877	SAMPLE	208644-009	ND	10	1.000
	BLANK	QC476126	ND	10	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Dissolved Solids (TDS)

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Batch#:	146162
Field ID:	ZZZZZZZZZZ	Sampled:	12/11/08
MSS Lab ID:	208557-006	Received:	12/12/08
Matrix:	Water	Prepared:	12/17/08
Units:	mg/L	Analyzed:	12/18/08

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim	Diln Fac
BS	QC476127		104.0	88.00		85	73-120			1.000
BSD	QC476128		104.0	88.00		85	73-120	0	22	1.000
SDUP	QC476129	1,456		1,473	11.11			1	20	1.111

RL= Reporting Limit
RPD= Relative Percent Difference

Total Organic Carbon (TOC)

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Batch#:	146214
Matrix:	Water	Sampled:	12/15/08
Units:	mg/L	Received:	12/15/08
Diln Fac:	1.000		

Field ID	Type	Lab ID	Result	RL	Analyzed
MW-1	SAMPLE	208644-001	0.69	0.50	12/18/08
MW-2	SAMPLE	208644-002	0.68	0.50	12/19/08
MW-3	SAMPLE	208644-003	0.63	0.50	12/19/08
MW-4	SAMPLE	208644-004	0.75	0.50	12/19/08
L-5 COMP	SAMPLE	208644-005	7.3	0.50	12/19/08
L-10 COMP	SAMPLE	208644-006	4.8	0.50	12/19/08
SOURCE	SAMPLE	208644-007	5.9	0.50	12/19/08
4876	SAMPLE	208644-008	5.8	0.50	12/19/08
4877	SAMPLE	208644-009	ND	0.50	12/19/08
	BLANK	QC476357	ND	0.50	12/18/08

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Organic Carbon (TOC)

Lab #:	208644	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Units:	mg/L
Field ID:	ZZZZZZZZZZ	Batch#:	146214
MSS Lab ID:	208655-004	Sampled:	12/15/08
Matrix:	Water	Received:	12/16/08

Type	Lab ID	MSS Result	Spiked	Result	%REC		Limits	RPD	Lim	Diln Fac	Analyzed
LCS	QC476358		10.00	9.476	95		90-110			1.000	12/18/08
MS	QC476359	35.98	8.000	43.25	91	NM	62-124			4.000	12/19/08
MSD	QC476360		8.000	43.26	91	NM	62-124	0	20	4.000	12/19/08

NM= Not Meaningful: Sample concentration > 4X spike concentration
RPD= Relative Percent Difference

Weck Laboratories, Inc.
Analytical Laboratory Services - Since 1964

Report Date: Wednesday, December 24, 2008
Received Date: Thursday, December 18, 2008
Received Time: 10:30 am

Turnaround Time: Normal

Client: Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Phone: (800) 522-1878
FAX: (510) 486-0532

Attn: Anna M. Pajarillo

Project: 208644

P.O.#:

Certificate of Analysis

Work Order: 8121879-01 **Sample ID: MW-1** **Matrix: Water**

Sampled by: Client **Sampled: 12/15/08 12:30** **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa).....................	ND		ug/l	2.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Monobromoacetic acid (mbaa).....................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dichloroacetic acid (dcaa)............................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Trichloroacetic acid (tcaa)............................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Bromochloroacetic acid (bcaa).....................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dibromoacetic acid (dbaa)...........................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
HAA5, Total..	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Surrogate: 2,3-Dibromopropionic acid	*80 %*			*70-130*			*12/19/08*	12/23/08 cwn	*W8L1152*

Work Order: 8121879-02 **Sample ID: MW-2** **Matrix: Water**

Sampled by: Client **Sampled: 12/15/08 11:15** **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa).....................	ND		ug/l	2.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Monobromoacetic acid (mbaa).....................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dichloroacetic acid (dcaa)............................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Trichloroacetic acid (tcaa)............................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Bromochloroacetic acid (bcaa).....................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dibromoacetic acid (dbaa)...........................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
HAA5, Total..	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Surrogate: 2,3-Dibromopropionic acid	*87 %*			*70-130*			*12/19/08*	12/23/08 cwn	*W8L1152*

Work Order: 8121879-03 **Sample ID: MW-3** **Matrix: Water**

Sampled by: Client **Sampled: 12/15/08 08:45** **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa).....................	ND		ug/l	2.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Monobromoacetic acid (mbaa).....................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dichloroacetic acid (dcaa)............................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152

Certificate of Analysis

Work Order: 8121879-03 **Sample ID: MW-3** **Matrix: Water**

Sampled by: Client **Sampled: 12/15/08 08:45** **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
HAA5, Total	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Surrogate: 2,3-Dibromopropionic acid	*94 %*			*70-130*			*12/19/08*	12/23/08 cwn	*W8L1152*

Work Order: 8121879-04 **Sample ID: MW-4** **Matrix: Water**

Sampled by: Client **Sampled: 12/15/08 09:40** **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dichloroacetic acid (dcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
HAA5, Total	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Surrogate: 2,3-Dibromopropionic acid	*91 %*			*70-130*			*12/19/08*	12/23/08 cwn	*W8L1152*

Work Order: 8121879-05 **Sample ID: L-5 COMP** **Matrix: Water**

Sampled by: Client **Sampled: 12/15/08 09:00** **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dichloroacetic acid (dcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
HAA5, Total	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Surrogate: 2,3-Dibromopropionic acid	*100 %*			*70-130*			*12/19/08*	12/23/08 cwn	*W8L1152*

Work Order: 8121879-06 **Sample ID: L-10 COMP** **Matrix: Water**

Sampled by: Client **Sampled: 12/15/08 10:00** **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dichloroacetic acid (dcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152

Certificate of Analysis

Work Order: 8121879-06 | **Sample ID: L-10 COMP** | **Matrix: Water**
Sampled by: Client | **Sampled: 12/15/08 10:00** | **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
HAA5, Total	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Surrogate: 2,3-Dibromopropionic acid	*91 %*			*70-130*			*12/19/08*	12/23/08 cwn	*W8L1152*

Work Order: 8121879-07 | **Sample ID: SOURCE** | **Matrix: Water**
Sampled by: Client | **Sampled: 12/15/08 10:00** | **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dichloroacetic acid (dcaa)	**1.4**		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
HAA5, Total	**1.4**		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Surrogate: 2,3-Dibromopropionic acid	*91 %*			*70-130*			*12/19/08*	12/23/08 cwn	*W8L1152*

Work Order: 8121879-08 | **Sample ID: 4876** | **Matrix: Water**
Sampled by: Client | **Sampled: 12/15/08 00:00** | **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dichloroacetic acid (dcaa)	**1.4**		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dibromoacetic acid (dbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
HAA5, Total	**1.4**		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Surrogate: 2,3-Dibromopropionic acid	*93 %*			*70-130*			*12/19/08*	12/23/08 cwn	*W8L1152*

Work Order: 8121879-09 | **Sample ID: 4877** | **Matrix: Water**
Sampled by: Client | **Sampled: 12/15/08 00:00** | **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Monochloroacetic acid (mcaa)	ND		ug/l	2.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Monobromoacetic acid (mbaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Dichloroacetic acid (dcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Trichloroacetic acid (tcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Bromochloroacetic acid (bcaa)	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152

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Work Order: 8121879-09 **Sample ID: 4877** **Matrix: Water**

Sampled by: Client **Sampled: 12/15/08 00:00** **Sample Note:**

Analyte	Result	Qualifier	Units	Reporting Limit	Dil	Method	Prepared	Analyzed	Batch
Dibromoacetic acid (dbaa)...........................	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
HAA5, Total..	ND		ug/l	1.0	1	EPA 552.2	12/19/08	12/23/08 cwn	W8L1152
Surrogate: 2,3-Dibromopropionic acid	*81 %*			*70-130*			*12/19/08*	12/23/08 cwn	*W8L1152*

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HAAs by EPA 552.2 - Quality Control

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Batch W8L1152 - EPA 552.2									
Blank (W8L1152-BLK1)					Prepared: 12/19/08	Analyzed: 12/22/08			
Surrogate: 2,3-Dibromopropionic acid		*10.4*		ug/l	*10.0*	*104*	*70-130*		
Monochloroacetic acid (mcaa)		ND		ug/l					
Monobromoacetic acid (mbaa)		ND		ug/l					
Dichloroacetic acid (dcaa)		ND		ug/l					
Trichloroacetic acid (tcaa)		ND		ug/l					
Bromochloroacetic acid (bcaa)		ND		ug/l					
Dibromoacetic acid (dbaa)		ND		ug/l					
HAA5, Total		ND		ug/l					
LCS (W8L1152-BS1)					Prepared: 12/19/08	Analyzed: 12/22/08			
Surrogate: 2,3-Dibromopropionic acid		*9.03*		ug/l	*10.0*	*90*	*70-130*		
Monochloroacetic acid (mcaa)		10.3		ug/l	10.0	103	70-130		
Monobromoacetic acid (mbaa)		8.76		ug/l	10.0	88	70-130		
Dichloroacetic acid (dcaa)		9.51		ug/l	10.0	95	70-130		
Trichloroacetic acid (tcaa)		10.1		ug/l	10.0	101	70-130		
Bromochloroacetic acid (bcaa)		9.68		ug/l	10.0	97	70-130		
Dibromoacetic acid (dbaa)		10.3		ug/l	10.0	103	70-130		
Matrix Spike (W8L1152-MS1)		Source: 8121879-01			Prepared: 12/19/08	Analyzed: 12/22/08			
Surrogate: 2,3-Dibromopropionic acid		*9.86*		ug/l	*10.0*	*99*	*70-130*		
Monochloroacetic acid (mcaa)	ND	12.0		ug/l	10.0	120	70-130		
Monobromoacetic acid (mbaa)	ND	11.8		ug/l	10.0	118	70-130		
Dichloroacetic acid (dcaa)	ND	11.7		ug/l	10.0	117	70-130		
Trichloroacetic acid (tcaa)	ND	9.68		ug/l	10.0	97	70-130		
Bromochloroacetic acid (bcaa)	ND	12.3		ug/l	10.0	123	70-130		
Dibromoacetic acid (dbaa)	ND	11.6		ug/l	10.0	116	70-130		
Matrix Spike (W8L1152-MS2)		Source: 8121879-02			Prepared: 12/19/08	Analyzed: 12/22/08			
Surrogate: 2,3-Dibromopropionic acid		*10.4*		ug/l	*10.0*	*104*	*70-130*		
Monochloroacetic acid (mcaa)	ND	12.0		ug/l	10.0	120	70-130		
Monobromoacetic acid (mbaa)	ND	11.4		ug/l	10.0	114	70-130		
Dichloroacetic acid (dcaa)	ND	11.5		ug/l	10.0	115	70-130		
Trichloroacetic acid (tcaa)	ND	10.5		ug/l	10.0	105	70-130		
Bromochloroacetic acid (bcaa)	ND	12.0		ug/l	10.0	120	70-130		
Dibromoacetic acid (dbaa)	ND	11.9		ug/l	10.0	119	70-130		
Matrix Spike Dup (W8L1152-MSD1)		Source: 8121879-01			Prepared: 12/19/08	Analyzed: 12/22/08			
Surrogate: 2,3-Dibromopropionic acid		*8.83*		ug/l	*10.0*	*88*	*70-130*		
Monochloroacetic acid (mcaa)	ND	11.8		ug/l	10.0	118	70-130	0.9	30
Monobromoacetic acid (mbaa)	ND	9.96		ug/l	10.0	100	70-130	17	30
Dichloroacetic acid (dcaa)	ND	10.7		ug/l	10.0	107	70-130	8	30
Trichloroacetic acid (tcaa)	ND	10.7		ug/l	10.0	107	70-130	10	30

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Weck Laboratories, Inc

HAAs by EPA 552.2 - Quality Control

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Batch W8L1152 - EPA 552.2									
Matrix Spike Dup (W8L1152-MSD1)		Source: 8121879-01			Prepared: 12/19/08 Analyzed: 12/22/08				
Bromochloroacetic acid (bcaa)	ND	10.8		ug/l	10.0	108	70-130	13	30
Dibromoacetic acid (dbaa)	ND	11.3		ug/l	10.0	113	70-130	2	30
Matrix Spike Dup (W8L1152-MSD2)		Source: 8121879-02			Prepared: 12/19/08 Analyzed: 12/22/08				
Surrogate: 2,3-Dibromopropionic acid		*9.15*		ug/l	*10.0*	*91*	*70-130*		
Monochloroacetic acid (mcaa)	ND	11.9		ug/l	10.0	119	70-130	1	30
Monobromoacetic acid (mbaa)	ND	9.77		ug/l	10.0	98	70-130	16	30
Dichloroacetic acid (dcaa)	ND	10.5		ug/l	10.0	105	70-130	9	30
Trichloroacetic acid (tcaa)	ND	11.1		ug/l	10.0	111	70-130	5	30
Bromochloroacetic acid (bcaa)	ND	10.6		ug/l	10.0	106	70-130	13	30
Dibromoacetic acid (dbaa)	ND	11.4		ug/l	10.0	114	70-130	5	30

Certificate of Analysis

Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.
ND = NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub = Subcontracted analysis, original report enclosed.
Dil = Dilution Factor
MDL = Method Detection Limit
MDA = Minimum Detectable Activity

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Kim Tu

Authorized Signature

Contact: Kim G Tu (Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

Laboratory Services Unit
1026 Blossom Hill Road
San Jose. CA 95123

Santa Clara Valley Water District

01/21/2009

Henry Barrientos
Groundwater Management Unit
Water Supply Management Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Henry Barrientos,

This transmits the analytical results for the Laboratory services that you requested. The data contained herein are supported by the Laboratory Services Unit's Quality Assurance/Quality Control Program.

The analytical results, quality control information, and sample handling observations have been reviewed for both completeness and accuracy, with any exceptions noted.

Laboratory Analyst(s)

James N. Scott
Laboratory Manager

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

Lab No. 200901050093

Client ID	Sample Location	Sample Source	Project No	Collect Date	Collect Time	Collected By
LSU	**08S02E08D12**	**Unknown**	**93401002-0000**	**01/05/2009**	**11:30**	**Tom M.**

Batch: 55039

Prep Date:	Analysis Date: 01/08/2009 Method: EPA 300 0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
			Bromide	0 14	mg/L		

Lab No. 200901050094

Client ID	Sample Location	Sample Source	Project No	Collect Date	Collect Time	Collected By
LSU	**08S02E08D11**	**Unknown**	**93401002-0000**	**01/05/2009**	**10:45**	**Tom M.**

Batch: 55039

Prep Date:	Analysis Date: 01/08/2009 Method: EPA 300 0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
			Bromide	0 07	mg/L		

Lab No. 200901050095

Client ID	Sample Location	Sample Source	Project No	Collect Date	Collect Time	Collected By
LSU	**08S02E07A14**	**Unknown**	**93401002-0000**	**01/05/2009**	**11:05**	**Tom M.**

Batch: 55039

Prep Date:	Analysis Date: 01/08/2009 Method: EPA 300 0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
			Bromide	0 13	mg/L		

Lab No. 200901050096

Client ID	Sample Location	Sample Source	Project No	Collect Date	Collect Time	Collected By
LSU	**08S02E07A15**	**Unknown**	**93401002-0000**	**01/05/2009**	**10:20**	**Tom M.**

Batch: 55039

Prep Date:	Analysis Date: 01/08/2009 Method: EPA 300 0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
			Bromide	0 12	mg/L		

Lab No. 200901050097

Client ID	Sample Location	Sample Source	Project No	Collect Date	Collect Time	Collected By
LSU	**L-5 COMP**	**Unknown**	**93401002-0000**	**01/05/2009**	**0:00**	**Tom M.**

Batch: 55039

Prep Date:	Analysis Date: 01/08/2009 Method: EPA 300 0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
			Bromide	0 25	mg/L		

Lab No 200901050098

Client ID	Sample Location	Sample Source	Project No	Collect Date	Collect Time	Collected By
LSU	**L-10 COMP**	**Unknown**	**93401002-0000**	**01/05/2009**	**0:00**	**Tom M.**

Batch: 55039

Prep Date:	Analysis Date: 01/08/2009 Method: EPA 300 0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
			Bromide	0 17	mg/L		

Lab No. 200901050099

Client ID	Sample Location	Sample Source	Project No	Collect Date	Collect Time	Collected By
LSU	**SOURCE**	**Unknown**	**93401002-0000**	**01/05/2009**	**11:40**	**Tom M.**

Batch: 55039

Prep Date:	Analysis Date: 01/08/2009 Method: EPA 300 0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
			Bromide	0 18	mg/L		

Lab No. 200901050100

Client ID	Sample Location	Sample Source	Project No	Collect Date	Collect Time	Collected By
LSU	**4885**	**Unknown**	**93401002-0000**	**01/05/2009**	**0:00**	**Tom M.**

Batch: 55039

Prep Date: Analysis Date: 01/08/2009 Method: EPA 300 0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.17	mg/L		

Legend:

DLR = Detection Limit For Reporting
ND = Not Detected At Or Above The DLR
NT = Not Tested
NR = Not Reported

ABS = Centimeters $^{-1}$
Cells/ml = Cells Per Milliliter
CFU/100 ml = Colony Forming Units Per 100 Milliliters
CFU/ml = Colony Forming Units Per Milliliter
cysts/L = Cysts Per Liter
Deg C = Degrees Centigrade
mg/L = Milligrams Per Liter
MPN/100ml = Most Probable Number Per 100 Milliliters
ng/L = Nanograms Per Liter

NTU = Nephelometric Turbidity Units
oocysts/L = Oocysts Per Liter
P/A 100ml = Presence/Absence Per 100 Milliliters
pCi/L = Picocuries Per Liter
Rhod-Eqiv = Rhodamine Equivalents
T O N = Threshold Odor Number
ug C/L = Micrograms Carbon Per Liter
ug/L = Micrograms Per Liter
umhos= Microhms

Data Qualifier Definitions:

A = Results may be biased high
B = Results may be biased low
D = Analyte is present in method blank

E = Analyte confirmation on secondary column
G = Sample hold time exceeded
H = Presence verified but not quantified
I = Sample unpreserved or improperly preserved

J = Estimated result; value may not be accurate
K = Too numerous to count; value represents filtration volume
L = Matrix interference(s)
M = Field blanks not prepared at customer's request

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

Batch: 55039

QC Code	Test Name		Reported Value	Units	Flag		Acceptance Range	RPD	Flag	RPD Limit
LFB	Bromide	Spike Amount: 0 5	0 46	mg/L		%Rec: 92 2	90 - 110			
LFB	Bromide	Spike Amount: 0 5	0 46	mg/L		%Rec: 92 2	90 - 110			
LFB	Bromide	Spike Amount: 0 5	0 50	mg/L		%Rec: 100 8	90 - 110			
LFM	Bromide	Spike Amount: 0 4	473	mg/L		%Rec: 101 8	90 - 110			
LFM	Bromide	Spike Amount: 0 4	0 43	mg/L		%Rec: 90 3	90 - 110			
LFM D	Bromide	Spike Amount: 0 4	0 44	mg/L		%Rec: 92 8	90 - 110	2 3		15
LFM D	Bromide	Spike Amount: 0.4	48	mg/L		%Rec: 103 5	90 - 110	1 5		15
QCS R	Bromide	20	19 6	mg/L		%Rec: 97 8	90 - 110			
LFB	Fluoride	Spike Amount: 0 5	0 47	mg/L		%Rec: 94 8	90 - 110			
LFB	Fluoride	Spike Amount: 0 5	0 46	mg/L		%Rec: 91.4	90 - 110			
LFB	Fluoride	Spike Amount: 0 5	0 45	mg/L		%Rec: 90 2	90 - 110			
LFM	Fluoride	Spike Amount: 0.4	325	mg/L	L	%Rec: 79.3	90 - 110			
LFM D	Fluoride	Spike Amount: 0 4	328	mg/L	L	%Rec: 80	90 - 110	0 9		15
QCS R	Fluoride	10	9 02	mg/L		%Rec: 90 2	90 - 110			
LFB	Nitrate	Spike Amount: 0 5	0 5	mg/L		%Rec: 91 2	90 - 110			
LFB	Nitrate	Spike Amount: 0 5	0 5	mg/L		%Rec: 92 2	90 - 110			
LFB	Nitrate	Spike Amount: 0 5	0 5	mg/L		%Rec: 99.4	90 - 110			
LFM	Nitrate	Spike Amount: 0 4	1 5	mg/L		%Rec: 94 3	90 - 110			
LFM	Nitrate	Spike Amount: 0 4	1 9	mg/L		%Rec: 107	90 - 110			
LFM D	Nitrate	Spike Amount: 0 4	1 6	mg/L		%Rec: 95	90 - 110	0 2		15
LFM D	Nitrate	Spike Amount: 0 4	1 9	mg/L		%Rec: 103 5	90 - 110	0 7		15
QCS R	Nitrate	20	21 9	mg/L		%Rec: 109 6	90 - 110			
LFB	Phosphate	Spike Amount: 0 5	0 46	mg/L		%Rec: 92 8	90 - 110			
LFB	Phosphate	Spike Amount: 0 5	0.47	mg/L		%Rec: 93 2	90 - 110			
LFB	Phosphate	Spike Amount: 0 5	0 46	mg/L		%Rec: 92.4	90 - 110			
LFM	Phosphate	Spike Amount: 0 4	0 47	mg/L		%Rec: 98 5	90 - 110			
LFM D	Phosphate	Spike Amount: 0 4	0 45	mg/L		%Rec: 93 5	90 - 110	4.4		15
QCS R	Phosphate	5	4 98	mg/L		%Rec: 99 6	90 - 110			
LFB	Sulfate	Spike Amount: 40	42 5	mg/L		%Rec: 106 2	90 - 110			
LFB	Sulfate	Spike Amount: 40	42.4	mg/L		%Rec: 106 1	90 - 110			
LFB	Sulfate	Spike Amount: 40	42 3	mg/L		%Rec: 105 8	90 - 110			
LFM	Sulfate	Spike Amount: 20	41 1	mg/L		%Rec: 102	90 - 110			
LFM D	Sulfate	Spike Amount: 20	41 1	mg/L		%Rec: 101 8	90 - 110	0 1		15
QCS R	Sulfate	30	30 4	mg/L		%Rec: 101 4	90 - 110			

Report Notes:

QCS, spike recovery, and RPD values that are outside of established limits are underlined.

If an LFM recovery exceeds the established limits for any analyte, and the laboratory performance for other QC parameters is shown to be in control for that analyte, then failure is not system related but due to matrix interferences and is labeled as suspect.

Reported values that are flagged "H" are above the established acceptance range; reported values that are flagged "L" are below the acceptance range. RPD results flagged "H" are above the established RPD limit -

Quality control sample (LFB, LFM, LFM D, QCS, QCS R, and Surrogate) reporting frequency is based on the method requirement (e g . a QCS may not be run with every batch).

Legend:

LFB = Laboratory Fortified Blank: An aliquot of a Laboratroty Reagent Blank (LRB) to which known quantities of the method analytes are added in the laboratory The LFB i analyzed exactly like a sample

LFB D = Laboratory Fortified Blank Duplicate: A duplicate aliquot of an LRB to which known quantities of the method analytes are added in the laboratory The LFB D is analyzed exactly like a sample

LFM = Laboratory Fortified Matrix: An aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory The LFM is analyze exactly like a sample

LFM D = Laboratory Fortified Matrix Duplicate: A duplicate aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory The LFM D is analyzed exactly like a sample

QCS = Quality Control Sample: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS is obtained fron a source external to the laboratory and different from the source of calibration standards Result is weighed against a specified concentration range

QCS R = Quality Control Sample Recovery: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS R i obtained from a source external to the laboratory and different from the source of calibration standards Result is weighed against a specified recovery range

RPD = Relative Percent Difference

SUR = Surrogate An organic compound that is similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
01/29/2009
MWH LABORATORIES

ACCREDITED IN ACCORDANCE WITH
nelac
01114CA

RCZ: Richard.C.Zimmer

Project Manager

Report#: 302546
Project:
RECYCLED-WATER-STUDY
Group: Recycled Water

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
PO #:
Group #: 302546
Project #: RECYCLED-WATER-STUDY
Project Manager: Richard.C.Zimmer
Phone: 626-386-1157

The following samples were received from you on **January 06, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Matrix	Sample Date
200901060008	L-5 Composite	Water	05-Jan-2009 0000
	@NDMA		
200901060009	L-10 Composite	Water	05-Jan-2009 0000
	@NDMA		

Test Description

@NDMA -- Nitrosamines by CLLE

2/8

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

6° on ice

302546

SERIAL NO. 14410

PROJECT NAME Reclaimed Water Study

PROJECT NUMBER 27011-07-4200

RECORDER T. Murphy (SIGN)

SAMPLERS T. MURPHY (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B. Glass Liter]
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB MWH Laboratories

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HN0$_3$	HCL	Thio	Field Filtered (check)	ANALYSIS REQUESTED: NDMA								TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1/5/09	comp	L-5 comp				B	A				1		x								1						
2		comp	L-10 comp				B	A				1		x								1						
3																												
4																												
5																												
6																												
7																												
8																												
9	3/8																											
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy		1/6/09	8:20am
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Commercial Courier	Cooler	None	T. Murphy	1/5/09	1400			

Send Lab Results to (Name): Wes Hawthorne cc: Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

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Shipped From:
LOCUS TECH
299 FAIRCHILD
MOUNTAIN VIEW, CA 94043

Sent By: CHARLOTTE CHEATHAM
Phone#: (650)960-1640
wgt(lbs): 23
Reference: 27011-07-4200

Ship To Company:
MWH LABOORATORIES
750 ROYAL OAKS 100
MONROVIA, CA 91016
LAB (626)386-1100

Service: **S**
Sort Code: **COM**

Special Services:
Signature Required

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 302546

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
01/06/2009

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	200901060008	**L-5 Composite**				
01/09/2009 20:27	N-Nitroso dimethylamine (NDMA)		5.0		ng/l	2
	200901060009	**L-10 Composite**				
01/09/2009 20:59	N-Nitroso dimethylamine (NDMA)		8.5		ng/l	2

SUMMARY OF POSITIVE DATA ONLY

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 302546

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
01/06/2009

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
L-5 Composite (200901060008)							**Sampled on**	**01/05/2009 0000**	
		EPA 1625MOD - Nitrosamines by CLLE							
1/8/2009	01/09/2009	20:27	505100	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	5.0	ng/l	2	1
1/8/2009	01/09/2009	20:27	505100	(EPA 1625MOD)	NDMA-D6	55	%		1
L-10 Composite (200901060009)							**Sampled on**	**01/05/2009 0000**	
		EPA 1625MOD - Nitrosamines by CLLE							
1/8/2009	01/09/2009	20:59	505100	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	8.5	ng/l	2	1
1/8/2009	01/09/2009	20:59	505100	(EPA 1625MOD)	NDMA-D6	79	%		1

Rounding on totals after summation.
(c) - indicates calculated results

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Summary: 302546

Locus Technologies

QC Ref # 505100 - Nitrosamines by CLLE **Analysis Date: 01/09/2009**

200901060008	L-5 Composite	Analyzed by: DLO
200901060009	L-10 Composite	Analyzed by: DLO

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
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1 800 566 LABS (1 800 566 5227)

Laboratory
QC Report: 302546

Locus Technologies

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 505100 - Nitrosamines by CLLE by EPA 1625MOD							**Analysis Date: 01/10/2009**		
LCS1	N-Nitroso dimethylamine (NDMA)		2.0	1.85	ng/l	93	(70-130)		0.0
LCS2	N-Nitroso dimethylamine (NDMA)		2.0	1.85	ng/L	93	(70-130)	20	0.0
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/l				
MS_200901060033	N-Nitroso dimethylamine (NDMA)	ND	10	10.4	ng/l	99	(70-130)		
MSD_200901060033	N-Nitroso dimethylamine (NDMA)	ND	10	9.13	ng/l	86	(70-130)	20	13
LCS1	NDMA-D6 (S)			106	%		(50-150)		
LCS2	NDMA-D6 (S)			116	%		(50-150)		
MBLK	NDMA-D6 (S)			92.0	%		(50-150)		
MS_200901060033	NDMA-D6 (S)	82		55.0	%		(50-150)		
MSD_200901060033	NDMA-D6 (S)	82		58.0	%		(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Sample Event 3
2/2/2009

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 509469

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 02-05-2009
MPN-Standard Bacteria: 02-10-2009

Project SOPs: MPN-Standard Bacteria (100130)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 02-02-2009
Date of Receipt: 02-02-2009
Date of Report: 02-10-2009

MPN REPORT

Location: MW-1 Lab ID-Version‡: 2252834-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	02/02/09 13:40	< 2	-	14
Total Coliform	SM 9221 B	02/02/09 13:40	< 2	-	14
E. coli	SM 9221 F	02/02/09 13:40	< 2	-	14

Comments:

Location: MW-2 Lab ID-Version‡: 2252836-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	02/02/09 13:40	< 2	-	14
Total Coliform	SM 9221 B	02/02/09 13:40	20	3	140
E. coli	SM 9221 F	02/02/09 13:40	< 2	-	14

Comments:

Location: MW-3 Lab ID-Version‡: 2252838-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	02/02/09 13:40	< 2	-	14
Total Coliform	SM 9221 B	02/02/09 13:40	< 2	-	14
E. coli	SM 9221 F	02/02/09 13:40	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 02-02-2009
Date of Receipt: 02-02-2009
Date of Report: 02-10-2009

MPN REPORT

Location: MW-4 Lab ID-Version‡: 2252840-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 F	02/02/09 13:40	< 2	-	14
Total Coliform	SM 9221 B	02/02/09 13:40	2	0.01	14
E. coli	SM 9221 F	02/02/09 13:40	< 2	-	14

Comments:

Location: L5 Comp Lab ID-Version‡: 2252842-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 F	02/02/09 13:40	< 2	-	14
Total Coliform	SM 9221 B	02/02/09 13:40	< 2	-	14
E. coli	SM 9221 F	02/02/09 13:40	< 2	-	14

Comments:

Location: L10 Comp Lab ID-Version‡: 2252844-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 F	02/02/09 13:40	< 2	-	14
Total Coliform	SM 9221 B	02/02/09 13:40	< 2	-	14
E. coli	SM 9221 F	02/02/09 13:40	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
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EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 02-02-2009
Date of Receipt: 02-02-2009
Date of Report: 02-10-2009

MPN REPORT

Location: Source

Lab ID-Version‡: 2252846-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 F	02/02/09 13:40	< 2	-	14
Total Coliform	SM 9221 B	02/02/09 13:40	< 2	-	14
E. coli	SM 9221 F	02/02/09 13:40	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 509469

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 02-05-2009

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 02-02-2009
Date of Receipt: 02-02-2009
Date of Report: 02-05-2009

HETEROTROPHIC PLATE COUNT REPORT

Location:	MW-1	MW-2	MW-3
Comments (see below)	None	None	None
Lab ID-Version‡:	2252833-1	2252835-1	2252837-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:100	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	02/02/2009 at 02:45 PM	02/02/2009 at 02:45 PM	02/02/2009 at 02:45 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	3,600	1,100	3,100

Comments:

Location:	MW-4	L5 Comp	L10 Comp
Comments (see below)	None	None	None
Lab ID-Version‡:	2252839-1	2252841-1	2252843-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	02/02/2009 at 02:45 PM	02/02/2009 at 02:45 PM	02/02/2009 at 02:45 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	2,000	3,900	1,000

Comments:

Location:	Source
Comments (see below)	None
Lab ID-Version‡:	2252845-1
Sample Type	Water sample
Method	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:1
Setup Time	02/02/2009 at 02:45 PM
Incubation Info	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml
CFU/Reporting Unit	64

Comments:

* Estimated result

‡ A "Version" greater than 1 indicates amended data.

Curtis & Tompkins, Ltd.

Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 209687
ANALYTICAL REPORT

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

Project : 27011-07-4200
Location : Recycled Water Study
Level : II

Sample ID	Lab ID
MW-1	209687-001
MW-2	209687-002
MW-3	209687-003
MW-4	209687-004
L-5 COMP	209687-005
L-10 COMP	209687-006
SOURCE	209687-007
4893	209687-008

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: ______________________ Date: 02/20/2009
Project Manager

Signature: ______________________ Date: 02/20/2009
Senior Program Manager

NELAP # 01107CA

CASE NARRATIVE

Laboratory number:	**209687**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**02/02/09, 02/10/09**
Samples Received:	**02/02/09**

This data package contains sample and QC results for eight water samples, requested for the above referenced project on 02/02/09 and 02/10/09. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

Metals (EPA 6010B):
No analytical problems were encountered.

Ion Chromatography (EPA 300.0):
No analytical problems were encountered.

Total Cyanide (SM4500CN-E):
No analytical problems were encountered.

Alkalinity (SM2320B):
No analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):
No analytical problems were encountered.

Total Phosphorous (SM4500P-E):
No analytical problems were encountered.

Total Organic Carbon (TOC) (SM5310C):
No analytical problems were encountered.

Dissolved Organic Carbon (DOC) (SM5310C):
No analytical problems were encountered.

Surfactants (MBAS) (SM5540C):
No analytical problems were encountered.

EPA 552 (EPA 552):
Weck Laboratories, Inc. in Hacienda Heights, CA performed the analysis. Please see the Weck Laboratories, Inc. case narrative.

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14418

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ____________ (SIGN)
SAMPLERS Castro/Murphy (PRINT)
____________ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 Poly
F. Other 500 ml glass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 209687

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HN0$_3$	HCL	H2SO4	Field Filtered (check)	See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6	Total Phosphates			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1	2-2-09	1155	MW-1	19.5	866	6.87	D	A	1					X									1		✓				
	2							C	A		1					X								1		✓				
	3							F	A				1				X							1		✓				
	4							E	A	1								X						1		✓				
	5							A	A			3							X					1		✓	✓			
	6							B	A	1										X				1		✓				
	7							E	A				1								X			1		✓				
	8							~~D~~	~~A~~	~~1~~														1		✓				
2	9		1025	MW-2	19.1	880	7.02	D	A	1					X									1		✓				
	10							C	A		1					X								1		✓				
	11							F	A				1				X							1		✓				
	12							E	A	1								X						1		✓				
	13							A	A			3							X					1		✓	✓			
	14							B	A	1										X				1		✓				
	15							E	A				1								X			1		✓				
	16							~~D~~	~~A~~	~~1~~														1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity/Sulfate/Nitrite/Nitrate/Chloride.
2. Boron/Calcium/Magnesium/Sodium/Potasium.

Field / Container Temp. 4°c

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-19, 20, 21	Thomas Murphy	2/2/09	1435		2/2/09	1435

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______________ TEL ________ FAX ________

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14419

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER ____________ (SIGN)
SAMPLERS Castro / Murphy (PRINT)
____________ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial]
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E. ~~Brass Tube~~ 250 poly]
[✓ F. Other 500ml glass]

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 209687

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HN0$_3$	HCL	H2SO4	Field Filtered (check)	ANALYSIS REQUESTED: See Note 1	See Note 2	TOC DOC	TDS	8010/8020	HAA6	Total Phosphates	[illegible]		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
3	1	2-2-09	835	MW-3	17.1	919	6.80	D	A	1					X									1		✓				
	2							C	A		1					X								1		✓				
	3							F	A				1				X							1		✓				
	4							E	A	1								X						1		✓				
	5							A	A			3							X					1		✓	✓			
	6							B	A	1										X				1		✓				
	7							E	A				1								X			1		✓				
	8							~~D~~	~~A~~	~~1~~												X		1		✓				
4	9		935	MW-4	18.0	939	6.90	D	A	1					X									1		✓				
	10							C	A		1					X								1		✓				
	11							F	A				1				X							1		✓				
	12							E	A	1								X						1		✓				
	13							A	A			3							X					1		✓	✓			
	14							B	A	1										X				1		✓				
	15							E	A				1								X			1		✓				
	16							~~D~~	~~A~~	~~1~~												X		1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity/Sulfate/Nitrite/Nitrate/Chloride.
2. Boron/Calcium/Magnesium/Sodium/Potasium.

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Heylert			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-18, 20, 21	Thomas Murphy	2/2/09	1435		2/2/09	1435

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ________________ TEL ________ FAX ________

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14420

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

RECORDER ________ (SIGN)

SAMPLERS Castro / Murphy (PRINT)

________ (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- [✓ A.] 40-ml VOA Vial
- [✓ B.] Glass Liter
- [✓ C.] Plastic 500-ml
- D. Plastic Liter
- [✓ E.] ~~Brass Tube~~ glass 250 Amber
- [✓ F.] Other 250 poly

SAMPLE DESCRIPTION CODES
- [✓ A.] Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other ________

TAT CODES
- [✓ 1.] Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ________

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 209687

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO3	HCL	H2SO4	Field Filtered (check)	See note 1	See note 2	TOC/~~DOC~~	TDS	8010/8020	HAA6	Total Phos/~~Phosphate~~	~~[illegible]~~	DOC	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	2-2-09	comp	L-5 COMP	11.5	2023	7.24	C	A	1					X									1		✓				
2							F	A		1					X								1		✓				
3							A	A				1				X							1		✓	✓			
4							F	A	1								X						1		✓				
5							A	A			2							X					1		✓	✓			
6							~~[illegible]~~	~~[illegible]~~											~~X~~				~~[illegible]~~		~~[illegible]~~				
7							~~[illegible]~~	~~[illegible]~~				~~[illegible]~~								~~X~~			~~[illegible]~~		~~[illegible]~~				
8							A	A				1									~~X~~	X	1		✓	✓			
9			L-10 COMP	13.3	1604	6.84	L	A	1					X									1		✓				
10							F	A		1					X								1		✓	✓			
11							A	A				1				X							1		✓				
12							F	A	1								X						1		✓				
13							A	A			2							X					1		✓	✓			
14							E	A	1										X				1		✓				
15							F	A				1								X			1		✓				
16							A	A				1									~~X~~	X	1		✓	✓			

Field / Container Temp. 4°C

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.

2. Boron, Calcium, Magnesium, Sodium, Potasium.

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-18, 19, 21		2/2/09	1435		2/2/09	1435

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ________ TEL ________ FAX ________

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14421

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
SAMPLERS Henry Costa Jr (PRINT)
(SIGN)
RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- [✓ A] 40-ml VOA Vial
- [✓ B] Glass Liter
- [✓ C] Plastic 500-ml
- [✓ D] Plastic Liter
- [✓ E] ~~Brass Tube~~ 250 Poly
- [✓ F] Other 250 glass

SAMPLE DESCRIPTION CODES
- [✓ A] Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- [✓ H] Blank/Spike
- I. Other

TAT CODES
- [✓ 1] Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 209687

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	~~Field Filtered (check)~~ NaOH	See note 1	See note 2	TOC/DOC	TDS	8010/8020	HAA6	Total Phosphate	Surfactants	CYANIDE	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	2-2-09	1045	Source	14.7	1249	6.81	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8	↓	↓	↓	↓	↓	↓	D	A	1												X		1		✓				
9	↓	↓	↓	↓	↓	↓	C	A					1									X	1		✓				
10	↓	—	4893	—	—	—	A	H			3							X					1		✓	✓	ON HOLD		
11		—	Temp Blank	—	—	—	E	H	1															*	✓	NA	*		
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride. *Temp to be measured & Rec. upon receipt of samples at lab 2.3 °C
2. Boron, Calcium, Magnesium, Sodium, Potasium.

2/2/09 1720

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-18, 19, 20	Thomas Murphy	2/2/09	1435		2/2/09	1435

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ OTHER ____ TEL ____ FAX ____

REV. 6/02

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COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 209687 Date Received 2/2/09 Number of coolers 3
Client LOCUS Project RECYCLED WATER STUDY

Date Opened 2/2/09 By (print) M. VILLANUEVA (sign)
Date Logged in ✓ By (print) ✓ (sign) ✓

1. Did cooler come with a shipping slip (airbill, etc) YES [✓ NO]
Shipping info

2A. Were custody seals present? ... ☒ YES (circle) on cooler on samples ☐ NO
How many 3 Name TOM MURPHY Date 2/2/09

2B. Were custody seals intact upon arrival? [✓ YES] NO N/A

3. Were custody papers dry and intact when received? [✓ YES] NO

4. Were custody papers filled out properly (ink, signed, etc)? [✓ YES] NO

5. Is the project identifiable from custody papers? (If so fill out top of form) [✓ YES] NO

6. Indicate the packing in cooler: (if other, describe)

☒ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 2.3 2/2/09 1720 MV

☐ Samples Received on ice & cold without a temperature blank ONLY 1 COOLER W/TEMP BLANK

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES [✓ NO]
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? [✓ YES] NO

10. Are samples in the appropriate containers for indicated tests? [✓ YES] NO

11. Are sample labels present, in good condition and complete? [✓ YES] NO

12. Do the sample labels agree with custody papers? [✓ YES] NO

13. Was sufficient amount of sample sent for tests requested? [✓ YES] NO

14. Are the samples appropriately preserved? [✓ YES] NO N/A

15. Are bubbles > 6mm absent in VOA samples? YES [✓ NO] N/A

16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS 5&6 MV
SAMPLE# ~~7&8~~ 1/2 VOA w/BUBBLE FOR 8010/8020

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1

Rev. 6 Number 1 of 3
Effective: 23 July 2008
Z:\qc\forms\checklists\Cooler Receipt Checklist_rv6.doc

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	147681
Lab ID:	209687-001	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	112	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	147681
Lab ID:	209687-002	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	0.5	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	147681
Lab ID:	209687-003	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	0.5	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	147681
Lab ID:	209687-004	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-5 COMP	Batch#:	147681
Lab ID:	209687-005	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	106	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-10 COMP	Batch#:	147681
Lab ID:	209687-006	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	147681
Lab ID:	209687-007	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	7.0	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	7.8	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	5.2	0.5
Chlorobenzene	ND	0.5
Bromoform	1.4	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	113	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	147681
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Type: BS

Lab ID: QC482378

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	22.05	110	80-120
Trichloroethene	20.00	19.55	98	80-120
Chlorobenzene	20.00	19.59	98	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-120

Type: BSD

Lab ID: QC482379

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	21.61	108	80-120	2	35
Trichloroethene	20.00	19.47	97	80-120	0	35
Chlorobenzene	20.00	19.43	97	80-120	1	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC482380	Batch#:	147681
Matrix:	Water	Analyzed:	02/06/09
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	147681
Lab ID:	209687-001	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	112	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	147681
Lab ID:	209687-002	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	**Result**	**RL**
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	103	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	147681
Lab ID:	209687-003	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	**Result**	**RL**
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	110	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	147681
Lab ID:	209687-004	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-5 COMP	Batch#:	147681
Lab ID:	209687-005	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	111	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	106	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-10 COMP	Batch#:	147681
Lab ID:	209687-006	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	114	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	147681
Lab ID:	209687-007	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	113	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	104	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	147681
Units:	ug/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Type: BS Lab ID: QC482378

Analyte	Spiked	Result	%REC	Limits
Benzene	20.00	19.76	99	80-120
Toluene	20.00	19.65	98	80-120
Chlorobenzene	20.00	19.59	98	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-122

Type: BSD Lab ID: QC482379

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	20.00	19.40	97	80-120	2	35
Toluene	20.00	18.96	95	80-120	4	35
Chlorobenzene	20.00	19.43	97	80-120	1	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	97	80-122

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC482380	Batch#:	147681
Matrix:	Water	Analyzed:	02/06/09
Units:	ug/L		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	100	80-122

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	4893	Batch#:	147914
Lab ID:	209687-008	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/13/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-120

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	147914
Units:	ug/L	Analyzed:	02/13/09
Diln Fac:	1.000		

Type: BS Lab ID: QC483319

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	22.47	112	80-120
Trichloroethene	20.00	20.36	102	80-120
Chlorobenzene	20.00	19.62	98	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-120

Type: BSD Lab ID: QC483320

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	21.79	109	80-120	3	35
Trichloroethene	20.00	19.80	99	80-120	3	35
Chlorobenzene	20.00	19.62	98	80-120	0	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC483321	Batch#:	147914
Matrix:	Water	Analyzed:	02/13/09
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	4893	Batch#:	147914
Lab ID:	209687-008	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Analyzed:	02/13/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-122

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	147914
Units:	ug/L	Analyzed:	02/13/09
Diln Fac:	1.000		

Type: BS Lab ID: QC483319

Analyte	Spiked	Result	%REC	Limits
Benzene	20.00	20.47	102	80-120
Toluene	20.00	19.96	100	80-120
Chlorobenzene	20.00	19.62	98	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	98	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-122

Type: BSD Lab ID: QC483320

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	20.00	19.99	100	80-120	2	35
Toluene	20.00	19.33	97	80-120	3	35
Chlorobenzene	20.00	19.62	98	80-120	0	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-122

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC483321	Batch#:	147914
Matrix:	Water	Analyzed:	02/13/09
Units:	ug/L		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	100	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-122

ND= Not Detected
RL= Reporting Limit

Boron

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Prepared:	02/05/09
Diln Fac:	1.000	Analyzed:	02/05/09
Batch#:	147631		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	209687-001	160	100
MW-2	SAMPLE	209687-002	150	100
MW-3	SAMPLE	209687-003	190	100
MW-4	SAMPLE	209687-004	200	100
L-5 COMP	SAMPLE	209687-005	300	100
L-10 COMP	SAMPLE	209687-006	270	100
SOURCE	SAMPLE	209687-007	480	100
	BLANK	QC482169	ND	100

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Boron

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Batch#:	147631
Field ID:	ZZZZZZZZZZ	Sampled:	02/03/09
MSS Lab ID:	209762-001	Received:	02/03/09
Matrix:	Water	Prepared:	02/05/09
Units:	ug/L	Analyzed:	02/05/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC482170		1,000	1,026	103	80-120		
BSD	QC482171		1,000	1,034	103	80-120	1	20
MS	QC482172	921.3	1,000	2,006	108	79-121		
MSD	QC482173		1,000	1,973	105	79-121	2	20

RPD= Relative Percent Difference

Calcium

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Prepared:	02/05/09
Batch#:	147631	Analyzed:	02/05/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	209687-001	64,000	500	1.000
MW-2	SAMPLE	209687-002	65,000	500	1.000
MW-3	SAMPLE	209687-003	98,000	2,000	10.00
MW-4	SAMPLE	209687-004	100,000	500	1.000
L-5 COMP	SAMPLE	209687-005	180,000	2,000	10.00
L-10 COMP	SAMPLE	209687-006	150,000	2,000	10.00
SOURCE	SAMPLE	209687-007	56,000	500	1.000
	BLANK	QC482169	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Calcium

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Batch#:	147631
Field ID:	ZZZZZZZZZZ	Sampled:	02/03/09
MSS Lab ID:	209762-001	Received:	02/03/09
Matrix:	Water	Prepared:	02/05/09
Units:	ug/L	Analyzed:	02/05/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC482170		20,000	20,450	102	80-120		
BSD	QC482171		20,000	20,270	101	80-120	1	20
MS	QC482172	118,400	20,000	143,300 >LR	125 NM	63-130		
MSD	QC482173		20,000	134,800 >LR	82 NM	63-130	NC	20

NC= Not Calculated
NM= Not Meaningful: Sample concentration > 4X spike concentration
>LR= Response exceeds instrument's linear range
RPD= Relative Percent Difference

Potassium

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Prepared:	02/05/09
Diln Fac:	1.000	Analyzed:	02/05/09
Batch#:	147631		

Field ID	**Type**	**Lab ID**	**Result**	**RL**
MW-1	SAMPLE	209687-001	600	500
MW-2	SAMPLE	209687-002	870	500
MW-3	SAMPLE	209687-003	ND	500
MW-4	SAMPLE	209687-004	ND	500
L-5 COMP	SAMPLE	209687-005	3,700	500
L-10 COMP	SAMPLE	209687-006	1,400	500
SOURCE	SAMPLE	209687-007	16,000	500
	BLANK	QC482169	ND	500

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Potassium

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Batch#:	147631
Field ID:	ZZZZZZZZZZ	Sampled:	02/03/09
MSS Lab ID:	209762-001	Received:	02/03/09
Matrix:	Water	Prepared:	02/05/09
Units:	ug/L	Analyzed:	02/05/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC482170		10,000	9,681	97	80-120		
BSD	QC482171		10,000	9,556	96	80-120	1	20
MS	QC482172	1,595	10,000	11,920	103	68-125		
MSD	QC482173		10,000	11,800	102	68-125	1	20

RPD= Relative Percent Difference

Magnesium

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Prepared:	02/05/09
Batch#:	147631	Analyzed:	02/05/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	209687-001	40,000	500	1.000
MW-2	SAMPLE	209687-002	38,000	500	1.000
MW-3	SAMPLE	209687-003	60,000	500	1.000
MW-4	SAMPLE	209687-004	56,000	500	1.000
L-5 COMP	SAMPLE	209687-005	90,000	500	1.000
L-10 COMP	SAMPLE	209687-006	110,000	2,000	10.00
SOURCE	SAMPLE	209687-007	31,000	500	1.000
	BLANK	QC482169	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Magnesium

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Batch#:	147631
Field ID:	ZZZZZZZZZZ	Sampled:	02/03/09
MSS Lab ID:	209762-001	Received:	02/03/09
Matrix:	Water	Prepared:	02/05/09
Units:	ug/L	Analyzed:	02/05/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC482170		20,000	20,520	103	80-120		
BSD	QC482171		20,000	19,880	99	80-120	3	20
MS	QC482172	69,680	20,000	94,770	125	66-126		
MSD	QC482173		20,000	90,460	104	66-126	5	20

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Sodium

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	ug/L	Prepared:	02/05/09
Batch#:	147631	Analyzed:	02/05/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	209687-001	35,000	500	1.000
MW-2	SAMPLE	209687-002	30,000	500	1.000
MW-3	SAMPLE	209687-003	41,000	500	1.000
MW-4	SAMPLE	209687-004	41,000	500	1.000
L-5 COMP	SAMPLE	209687-005	230,000	5,000	10.00
L-10 COMP	SAMPLE	209687-006	70,000	500	1.000
SOURCE	SAMPLE	209687-007	160,000	5,000	10.00
	BLANK	QC482169	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Sodium

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Batch#:	147631
Field ID:	ZZZZZZZZZZ	Sampled:	02/03/09
MSS Lab ID:	209762-001	Received:	02/03/09
Matrix:	Water	Prepared:	02/05/09
Units:	ug/L	Analyzed:	02/05/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC482170		20,000	19,630	98	80-120		
BSD	QC482171		20,000	19,380	97	80-120	1	20
MS	QC482172	194,000	20,000	238,300 >LR	221 NM	60-131		
MSD	QC482173		20,000	219,300 >LR	126 NM	60-131	NC	20

NC= Not Calculated
NM= Not Meaningful: Sample concentration > 4X spike concentration
>LR= Response exceeds instrument's linear range
RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Analytical Report

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	147520
Units:	mg/L	Received:	02/02/09

Field ID: MW-1 Lab ID: 209687-001
Type: SAMPLE Sampled: 02/02/09 11:55

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	49	1.0	5.000	02/03/09 03:16
Nitrogen, Nitrite	ND	0.05	1.000	02/02/09 18:47
Nitrogen, Nitrate	2.2	0.05	1.000	02/02/09 18:47
Sulfate	55	2.5	5.000	02/03/09 03:16

Field ID: MW-2 Lab ID: 209687-002
Type: SAMPLE Sampled: 02/02/09 10:25

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	25	1.0	5.000	02/03/09 03:33
Nitrogen, Nitrite	ND	0.05	1.000	02/02/09 23:29
Nitrogen, Nitrate	2.8	0.05	1.000	02/02/09 23:29
Sulfate	35	0.50	1.000	02/02/09 23:29

Field ID: MW-3 Lab ID: 209687-003
Type: SAMPLE Sampled: 02/02/09 08:35

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	47	1.0	5.000	02/03/09 03:50
Nitrogen, Nitrite	ND	0.05	1.000	02/02/09 19:05
Nitrogen, Nitrate	2.9	0.05	1.000	02/02/09 19:05
Sulfate	55	2.5	5.000	02/03/09 03:50

Field ID: MW-4 Lab ID: 209687-004
Type: SAMPLE Sampled: 02/02/09 09:35

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	43	1.0	5.000	02/03/09 04:08
Nitrogen, Nitrite	ND	0.05	1.000	02/02/09 23:47
Nitrogen, Nitrate	2.6	0.05	1.000	02/02/09 23:47
Sulfate	60	2.5	5.000	02/03/09 04:08

Field ID: L-5 COMP Lab ID: 209687-005
Type: SAMPLE Sampled: 02/02/09

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	92	2.0	10.00	02/03/09 00:04
Nitrogen, Nitrite	ND	0.10	2.000	02/02/09 19:25
Nitrogen, Nitrate	0.23	0.10	2.000	02/02/09 19:25
Sulfate	550	25	50.00	02/02/09 18:13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	147520
Units:	mg/L	Received:	02/02/09

Field ID: L-10 COMP
Type: SAMPLE
Lab ID: 209687-006
Sampled: 02/02/09

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	71	10	50.00	02/03/09 02:41
Nitrogen, Nitrite	ND	0.10	2.000	02/02/09 21:27
Nitrogen, Nitrate	1.9	0.10	2.000	02/02/09 21:27
Sulfate	240	25	50.00	02/03/09 02:41

Field ID: SOURCE
Type: SAMPLE
Lab ID: 209687-007
Sampled: 02/02/09 10:45

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	220	5.0	25.00	02/03/09 02:58
Nitrogen, Nitrite	0.06	0.05	1.000	02/02/09 22:37
Nitrogen, Nitrate	9.1	0.25	5.000	02/02/09 22:20
Sulfate	95	2.5	5.000	02/02/09 22:20

Type: BLANK
Lab ID: QC481698
Diln Fac: 1.000
Analyzed: 02/02/09 12:55

Analyte	Result	RL
Chloride	ND	0.20
Nitrogen, Nitrite	ND	0.05
Nitrogen, Nitrate	ND	0.05
Sulfate	ND	0.50

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Diln Fac:	1.000
Units:	mg/L	Batch#:	147520

Type:	BS	Analyzed:	02/02/09 13:12
Lab ID:	QC481699		

Analyte	Spiked	Result	%REC	Limits
Chloride	4.000	3.893	97	80-120
Nitrogen, Nitrite	1.000	0.9571	96	80-120
Nitrogen, Nitrate	1.000	0.9685	97	80-120
Sulfate	10.00	9.749	97	80-120

Type:	BSD	Analyzed:	02/02/09 13:30
Lab ID:	QC481700		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	4.000	3.902	98	80-120	0	20
Nitrogen, Nitrite	1.000	0.9540	95	80-120	0	20
Nitrogen, Nitrate	1.000	0.9658	97	80-120	0	20
Sulfate	10.00	9.912	99	80-120	2	20

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Field ID:	L-5 COMP	Diln Fac:	50.00
MSS Lab ID:	209687-005	Batch#:	147520
Matrix:	Water	Sampled:	02/02/09
Units:	mg/L	Received:	02/02/09

Type: MS
Lab ID: QC481709
Analyzed: 02/03/09 00:21

Analyte	MSS Result	Spiked	Result	%REC	Limits
Chloride	92.30	100.0	189.8	97	80-120
Nitrogen, Nitrite	0.06450	25.00	24.49	98	80-120
Nitrogen, Nitrate	0.2302	25.00	24.74	98	80-120
Sulfate	550.6	250.0	796.6	98	80-120

Type: MSD
Lab ID: QC481710
Analyzed: 02/03/09 00:39

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	100.0	190.9	99	80-120	1	20
Nitrogen, Nitrite	25.00	24.72	99	80-120	1	20
Nitrogen, Nitrate	25.00	24.95	99	80-120	1	20
Sulfate	250.0	800.5	100	80-120	0	20

RPD= Relative Percent Difference

Alkalinity

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	02/02/09
Units:	mg/L	Received:	02/02/09
Batch#:	147559	Analyzed:	02/03/09

Field ID:	MW-1	Lab ID:	209687-001
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	270	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	270	6.7

Field ID:	MW-2	Lab ID:	209687-002
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	300	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	300	6.7

Field ID:	MW-3	Lab ID:	209687-003
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	430	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	430	6.7

Field ID:	MW-4	Lab ID:	209687-004
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	430	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	430	6.7

Field ID:	L-5 COMP	Lab ID:	209687-005
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	640	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	640	6.7

ND= Not Detected
RL= Reporting Limit

Alkalinity

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	02/02/09
Units:	mg/L	Received:	02/02/09
Batch#:	147559	Analyzed:	02/03/09

Field ID: L-10 COMP   Lab ID: 209687-006
Type: SAMPLE   Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	670	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	670	6.7

Field ID: SOURCE   Lab ID: 209687-007
Type: SAMPLE   Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	180	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	180	6.7

Type: BLANK   Diln Fac: 1.000
Lab ID: QC481858

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Alkalinity

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Units:	mg/L
Type:	LCS	Diln Fac:	4.000
Lab ID:	QC481859	Batch#:	147559
Matrix:	Water	Analyzed:	02/03/09

Spiked	Result	%REC	Limits
200.0	195.6	98	90-110

Batch QC Report

Alkalinity

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Diln Fac:	4.000
Field ID:	ZZZZZZZZZZ	Batch#:	147559
MSS Lab ID:	209649-001	Sampled:	01/29/09
Matrix:	Water	Received:	01/30/09
Units:	mg/L	Analyzed:	02/03/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC481860	198.7	200.0	391.2	96	80-120		
MSD	QC481861		200.0	392.0	97	80-120	0	25

RPD= Relative Percent Difference

Total Cyanide

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	147673
Field ID:	SOURCE	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	mg/L	Analyzed:	02/06/09
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	209687-007	ND	0.01
BLANK	QC482341	ND	0.01

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Cyanide

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	147673
Field ID:	ZZZZZZZZZZ	Sampled:	02/03/09
MSS Lab ID:	209746-005	Received:	02/04/09
Matrix:	Water	Analyzed:	02/06/09
Units:	mg/L		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
MS	QC482342	0.2256	0.2000	0.3775	76	67-124			2.000
MSD	QC482343		0.2000	0.3651	70	67-124	3	20	2.000
LCS	QC482344		0.2000	0.2067	103	80-124			1.000

RPD= Relative Percent Difference

Dissolved Organic Carbon (DOC)

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Batch#:	147634
Matrix:	Water	Sampled:	02/02/09
Units:	mg/L	Received:	02/02/09
Diln Fac:	1.000	Analyzed:	02/05/09

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	209687-001	ND	1.0
MW-2	SAMPLE	209687-002	ND	1.0
MW-3	SAMPLE	209687-003	ND	1.0
MW-4	SAMPLE	209687-004	ND	1.0
L-5 COMP	SAMPLE	209687-005	6.2	1.0
L-10 COMP	SAMPLE	209687-006	3.1	1.0
SOURCE	SAMPLE	209687-007	5.4	1.0
	BLANK	QC482181	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Dissolved Organic Carbon (DOC)

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Batch#:	147634
Field ID:	ZZZZZZZZZZ	Sampled:	02/02/09
MSS Lab ID:	209684-003	Received:	02/02/09
Units:	mg/L	Analyzed:	02/05/09
Diln Fac:	1.000		

Type	Lab ID	Matrix	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC482182	Water		10.00	9.745	97	90-110		
MS	QC482183	Filtrate	1.457	2.000	3.704	112	80-121		
MSD	QC482184	Filtrate		2.000	3.690	112	80-121	0	20

RPD= Relative Percent Difference

Surfactants (MBAS)

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	147580
Field ID:	SOURCE	Sampled:	02/02/09 10:45
Matrix:	Water	Received:	02/02/09
Units:	mg/L	Prepared:	02/04/09 10:15
Diln Fac:	1.000	Analyzed:	02/10/09 11:58

Type	Lab ID	Result	RL
SAMPLE	209687-007	ND	0.20
BLANK	QC481957	ND	0.20

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Surfactants (MBAS)

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	147580
Field ID:	SOURCE	Sampled:	02/02/09 10:45
MSS Lab ID:	209687-007	Received:	02/02/09
Matrix:	Water	Prepared:	02/04/09 10:15
Units:	mg/L	Analyzed:	02/10/09 11:58
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC481958		0.3000	0.2989	100	80-120		
MS	QC481959	<0.2000	0.3000	0.3094	103	43-142		
MSD	QC481960		0.3000	0.2989	100	43-142	3	30

RPD= Relative Percent Difference

Total Phosphorous

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Batch#:	147574
Matrix:	Water	Sampled:	02/02/09
Units:	mg/L	Received:	02/02/09
Diln Fac:	1.000	Analyzed:	02/04/09

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	209687-001	0.073	0.030
MW-2	SAMPLE	209687-002	0.13	0.030
MW-3	SAMPLE	209687-003	0.049	0.030
MW-4	SAMPLE	209687-004	0.034	0.030
L-10 COMP	SAMPLE	209687-006	0.036	0.030
SOURCE	SAMPLE	209687-007	0.36	0.030
	BLANK	QC481924	ND	0.030

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Phosphorous

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Batch#:	147574
Field ID:	SOURCE	Sampled:	02/02/09
MSS Lab ID:	209687-007	Received:	02/02/09
Matrix:	Water	Analyzed:	02/04/09
Units:	mg/L		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
MS	QC481925	0.3576	0.1980	0.5838	114	19-182			2.500
MSD	QC481926		0.1980	0.5686	107	19-182	3	26	2.500
LCS	QC481927		0.1980	0.2027	102	72-134			1.000

RPD= Relative Percent Difference

Total Dissolved Solids (TDS)

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	mg/L	Prepared:	02/03/09
Batch#:	147549	Analyzed:	02/04/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	209687-001	440	10	1.000
MW-2	SAMPLE	209687-002	410	10	1.000
MW-3	SAMPLE	209687-003	550	10	1.000
MW-4	SAMPLE	209687-004	600	10	1.000
L-5 COMP	SAMPLE	209687-005	1,610	11	1.111
L-10 COMP	SAMPLE	209687-006	1,150	10	1.000
SOURCE	SAMPLE	209687-007	780	10	1.000
	BLANK	QC481814	ND	10	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Dissolved Solids (TDS)

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Batch#:	147549
Field ID:	ZZZZZZZZZZ	Sampled:	01/29/09
MSS Lab ID:	209649-001	Received:	01/30/09
Matrix:	Water	Prepared:	02/03/09
Units:	mg/L	Analyzed:	02/04/09

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim	Diln Fac
BS	QC481815		104.0	88.00		85	73-120			1.000
BSD	QC481816		104.0	92.00		88	73-120	4	22	1.000
SDUP	QC481817	2,374		2,386	14.29			0	20	1.429
SDUP	QC481818	2,374		2,340	14.29			1	20	1.429

RL= Reporting Limit
RPD= Relative Percent Difference

Total Organic Carbon (TOC)

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Batch#:	147686
Matrix:	Water	Sampled:	02/02/09
Units:	mg/L	Received:	02/02/09
Diln Fac:	1.000	Analyzed:	02/06/09

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	209687-001	ND	0.50
MW-2	SAMPLE	209687-002	ND	0.50
MW-3	SAMPLE	209687-003	ND	0.50
MW-4	SAMPLE	209687-004	ND	0.50
L-5 COMP	SAMPLE	209687-005	6.5	0.50
L-10 COMP	SAMPLE	209687-006	3.2	0.50
SOURCE	SAMPLE	209687-007	5.4	0.50
	BLANK	QC482409	ND	0.50

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Organic Carbon (TOC)

Lab #:	209687	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Diln Fac:	1.000
Field ID:	SOURCE	Batch#:	147686
MSS Lab ID:	209687-007	Sampled:	02/02/09
Matrix:	Water	Received:	02/02/09
Units:	mg/L	Analyzed:	02/06/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC482410		10.00	10.40	104	90-110		
MS	QC482411	5.362	2.000	7.333	99	62-124		
MSD	QC482412		2.000	7.372	101	62-124	1	20

RPD= Relative Percent Difference

Laboratory Job Number 209687

Subcontracted Products

Weck Laboratories, Inc.

Certificate of Analysis

Report Date: Monday, February 9, 2009
Received Date: Wednesday, February 4, 2009
Received Time: 10:30 am
Turnaround Time: Normal

Client: Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Phones: (800) 522-1878
Fax: (510) 486-0532

P.O. #:

Attn: Anna M. Pajarillo
Project: 209687

Lab Sample ID: 9B04045-01 **Sample ID:** **MW-1** **Matrix:** Water
Sampled by: Client **Sampled: 02/02/09 11:55**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/6/09 23:58 cwn	W9B0238	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/6/09 23:58 cwn	W9B0238	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/6/09 23:58 cwn	W9B0238	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/6/09 23:58 cwn	W9B0238	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/6/09 23:58 cwn	W9B0238	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	2/4/09	2/6/09 23:58 cwn	W9B0238	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/6/09 23:58 cwn	W9B0238	
Surrogate: 2,3-Dibromopropionic acid	*112 %*		*70-130*							

Lab Sample ID: 9B04045-02 **Sample ID:** **MW-2** **Matrix:** Water
Sampled by: Client **Sampled: 02/02/09 10:25**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:23 cwn	W9B0238	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:23 cwn	W9B0238	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:23 cwn	W9B0238	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:23 cwn	W9B0238	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:23 cwn	W9B0238	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:23 cwn	W9B0238	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:23 cwn	W9B0238	
Surrogate: 2,3-Dibromopropionic acid	*94 %*		*70-130*							

Lab Sample ID: 9B04045-03 **Sample ID:** **MW-3** **Matrix:** Water
Sampled by: Client **Sampled: 02/02/09 08:35**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:48 cwn	W9B0238	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:48 cwn	W9B0238	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:48 cwn	W9B0238	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:48 cwn	W9B0238	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:48 cwn	W9B0238	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:48 cwn	W9B0238	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 0:48 cwn	W9B0238	

Certificate of Analysis

Lab Sample ID: 9B04045-03 **Sample ID:** **MW-3** **Matrix:** Water
Sampled by: Client **Sampled: 02/02/09 08:35**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Surrogate: 2,3-Dibromopropionic acid	*98 %*		*70-130*							

Lab Sample ID: 9B04045-04 **Sample ID:** **MW-4** **Matrix:** Water
Sampled by: Client **Sampled: 02/02/09 09:35**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 1:12 cwn	W9B0238	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 1:12 cwn	W9B0238	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 1:12 cwn	W9B0238	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 1:12 cwn	W9B0238	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 1:12 cwn	W9B0238	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 1:12 cwn	W9B0238	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 1:12 cwn	W9B0238	
Surrogate: 2,3-Dibromopropionic acid	*92 %*		*70-130*							

Lab Sample ID: 9B04045-05 **Sample ID:** **L-10 COMP** **Matrix:** Water
Sampled by: Client **Sampled: 02/02/09 00:00**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:02 cwn	W9B0238	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:02 cwn	W9B0238	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:02 cwn	W9B0238	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:02 cwn	W9B0238	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:02 cwn	W9B0238	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:02 cwn	W9B0238	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:02 cwn	W9B0238	
Surrogate: 2,3-Dibromopropionic acid	*105 %*		*70-130*							

Lab Sample ID: 9B04045-06 **Sample ID:** **SOURCE** **Matrix:** Water
Sampled by: Client **Sampled: 02/02/09 10:45**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:26 cwn	W9B0238	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:26 cwn	W9B0238	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:26 cwn	W9B0238	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:26 cwn	W9B0238	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:26 cwn	W9B0238	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:26 cwn	W9B0238	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	2/4/09	2/7/09 2:26 cwn	W9B0238	
Surrogate: 2,3-Dibromopropionic acid	*124 %*		*70-130*							

Certificate of Analysis

Quality Control Section

HAAs by EPA 552.2 - Quality Control

Batch W9B0238 - EPA 552.2

Blank (W9B0238-BLK1) **Prepared: 02/04/09 Analyzed: 02/06/09 16:55**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*12.8*		ug/l	*10.0*	*128*	*70-130*		
Monochloroacetic acid (mcaa)		ND		ug/l					
Monobromoacetic acid (mbaa)		ND		ug/l					
Dichloroacetic acid (dcaa)		ND		ug/l					
Trichloroacetic acid (tcaa)		ND		ug/l					
Bromochloroacetic acid (bcaa)		ND		ug/l					
Dibromoacetic acid (dbaa)		ND		ug/l					
HAA5, Total		ND		ug/l					

LCS (W9B0238-BS1) **Prepared: 02/04/09 Analyzed: 02/06/09 17:20**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.46*		ug/l	*10.0*	*95*	*70-130*		
Monochloroacetic acid (mcaa)		9.27		ug/l	10.0	93	70-130		
Monobromoacetic acid (mbaa)		8.92		ug/l	10.0	89	70-130		
Dichloroacetic acid (dcaa)		10.4		ug/l	10.0	104	70-130		
Trichloroacetic acid (tcaa)		9.81		ug/l	10.0	98	70-130		
Bromochloroacetic acid (bcaa)		9.71		ug/l	10.0	97	70-130		
Dibromoacetic acid (dbaa)		10.1		ug/l	10.0	101	70-130		

Matrix Spike (W9B0238-MS1) **Source: 9A29052-01** **Prepared: 02/04/09 Analyzed: 02/06/09 17:45**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*10.7*		ug/l	*10.0*	*107*	*70-130*		
Monochloroacetic acid (mcaa)	ND	9.84		ug/l	10.0	98	70-130		
Monobromoacetic acid (mbaa)	0.772	10.4		ug/l	10.0	96	70-130		
Dichloroacetic acid (dcaa)	0.654	11.1		ug/l	10.0	104	70-130		
Trichloroacetic acid (tcaa)	0.406	11.5		ug/l	10.0	111	70-130		
Bromochloroacetic acid (bcaa)	1.14	12.3		ug/l	10.0	112	70-130		
Dibromoacetic acid (dbaa)	2.29	14.0		ug/l	10.0	117	70-130		

Matrix Spike (W9B0238-MS2) **Source: 9A29052-02** **Prepared: 02/04/09 Analyzed: 02/06/09 18:34**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*11.1*		ug/l	*10.0*	*111*	*70-130*		
Monochloroacetic acid (mcaa)	ND	12.0		ug/l	10.0	120	70-130		
Monobromoacetic acid (mbaa)	ND	11.1		ug/l	10.0	111	70-130		
Dichloroacetic acid (dcaa)	1.77	12.4		ug/l	10.0	106	70-130		
Trichloroacetic acid (tcaa)	0.576	11.6		ug/l	10.0	110	70-130		
Bromochloroacetic acid (bcaa)	2.95	13.7		ug/l	10.0	108	70-130		
Dibromoacetic acid (dbaa)	5.73	17.2		ug/l	10.0	115	70-130		

Matrix Spike Dup (W9B0238-MSD1) **Source: 9A29052-01** **Prepared: 02/04/09 Analyzed: 02/06/09 18:09**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit

Certificate of Analysis

HAAs by EPA 552.2 - Quality Control

Batch W9B0238 - EPA 552.2

Matrix Spike Dup (W9B0238-MSD1) **Source: 9A29052-01** **Prepared: 02/04/09** **Analyzed: 02/06/09 18:09**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.76*		ug/l	*10.0*	*98*	*70-130*		
Monochloroacetic acid (mcaa)	ND	9.04		ug/l	10.0	90	70-130	8	30
Monobromoacetic acid (mbaa)	0.772	9.37		ug/l	10.0	86	70-130	10	30
Dichloroacetic acid (dcaa)	0.654	10.1		ug/l	10.0	94	70-130	9	30
Trichloroacetic acid (tcaa)	0.406	10.6		ug/l	10.0	102	70-130	9	30
Bromochloroacetic acid (bcaa)	1.14	11.3		ug/l	10.0	102	70-130	9	30
Dibromoacetic acid (dbaa)	2.29	12.9		ug/l	10.0	106	70-130	8	30

Matrix Spike Dup (W9B0238-MSD2) **Source: 9A29052-02** **Prepared: 02/04/09** **Analyzed: 02/06/09 18:59**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.58*		ug/l	*10.0*	*96*	*70-130*		
Monochloroacetic acid (mcaa)	ND	10.7		ug/l	10.0	107	70-130	11	30
Monobromoacetic acid (mbaa)	ND	10.0		ug/l	10.0	100	70-130	10	30
Dichloroacetic acid (dcaa)	1.77	10.9		ug/l	10.0	91	70-130	13	30
Trichloroacetic acid (tcaa)	0.576	10.6		ug/l	10.0	100	70-130	9	30
Bromochloroacetic acid (bcaa)	2.95	12.9		ug/l	10.0	100	70-130	6	30
Dibromoacetic acid (dbaa)	5.73	16.1		ug/l	10.0	104	70-130	7	30

Certificate of Analysis

Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Kim Tu

Authorized Signature

Contact: Kim G Tu (Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
Dil	Dilution Factor
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
03/11/2009
MWH LABORATORIES

ACCREDITED IN ACCORDANCE WITH nelac
01114CA

RCZ: Richard.C.Zimmer

Project Manager

Report#: 303170
Project:
RECYCLED-WATER-STUDY
Group: Chemistry

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
PO #: 27011-07-7000
Group #: 303170
Project #: RECYCLED-WATER-STUDY
Project Manager: Richard.C.Zimmer
Phone: 626-386-1157

The following samples were received from you on **February 03, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id		Matrix	Sample Date
200902030008	L5 Composite		Water	02-Feb-2009 0000
	@PFC			
200902030009	L10 Composite		Water	02-Feb-2009 0000
	@NDMA	@PFC		
200902030010	MW1		Water	02-Feb-2009 1155
	@NDMA	@PFC		
200902030011	MW2		Water	02-Feb-2009 1025
	@NDMA	@PFC		
200902030012	MW3		Water	02-Feb-2009 0835
	@NDMA	@PFC		
200902030013	MW4		Water	02-Feb-2009 0935
	@NDMA	@PFC		
200902030014	Source		Water	02-Feb-2009 1045
	@525PLUS	@NDMA	@PFC	
	EDTA by Ion Chrom-Subcontract			

Test Description

@525PLUS -- Semivolatiles by GCMS
@NDMA -- Nitrosamines by CLLE
@PFC -- Perfluorinated compounds

MWH Laboratories
A Division of MWH Americas, Inc.
750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

303189
70

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLE TEMP WHEN REC'D AT LAB: 6 (Compliance: 4 +/- 2°C)

CONDITION OF BLUE ICE: FROZEN X PARTIALLY FROZEN ___ THAWED ___

SAMPLES CHECKED AGAINST COC BY: JT

SAMPLES LOGGED IN BY: JS

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: LOCUS TECHNOLOGIES

SYSTEM #:

MWH LABS CLIENT CODE: LOCUS

P.O.# / PROJECT JOB #: 27011-07-7000

SAMPLER PRINTED NAME AND SIGNATURE:

TAT requested: rush by adv notice only
STD ✓ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

(check for yes)
COMPLIANCE SAMPLES ☐
- Requires state forms ☐

(check for yes)
NON-COMPLIANCE SAMPLES ☐
REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA....)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA	PFC's	EDTA	EPA525+		SAMPLER COMMENTS
2/2/07	COMP	L5 COMP		RGW		X	0	1	0	0		Poured out
	COMP	L10 COMP		RGW		X	1	1	0	0		half of PFC
	1155	MW1		RGW	X		2	1	0	0		into 125ml
	1025	MW2		RGW	X		2	1	0	0		amber to be
	835	MW3		RGW	X		2	1	0	0		used as EDTA
	935	MW4		RGW	X		2	1	0	0		
	1045	SOURCE		RGW	X		2	1	1	1	received 2	
									DID NOT REC			

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		TOM MURPHY	LOCUS TECHNOLOGIES	2/2/07	1400
RECEIVED BY:		J TRIPP	MWH	2/3	8:00
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

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wgt(lbs): 27
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750 ROYAL OAKS 100
MONROVIA, CA 91016
LAB (800)566-5227

Service: **S**
Sort Code: **COM**
Special Services:
Signature Required

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 303170

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
02/03/2009

Analyzed		Analyte	Sample ID	Result	Federal MCL	Units	MRL
		200902030008	**L5 Composite**				
		200902030009	**L10 Composite**				
02/10/2009		N-Nitroso dimethylamine (NDMA)		15		ng/l	2
		200902030010	**MW1**				
		200902030011	**MW2**				
		200902030012	**MW3**				
		200902030013	**MW4**				
		200902030014	**Source**				
02/13/2009	03:38	N-Nitroso dimethylamine (NDMA)		460		ng/l	8
02/03/2009	23:36	Perfluoro octanesulfonate-PFOS		78		ng/L	5
02/03/2009	23:36	Perfluoro octanoic acid - PFOA		43		ng/L	5

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
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1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 303170

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
02/03/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
L5 Composite (200902030008)					**Sampled on**	**02/02/2009 0000**		
			MWH PFC - Perfluorinated compounds					
	02/03/2009 22:36	506203	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/03/2009 22:36	506203	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	02/03/2009 22:36	506203	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	02/03/2009 22:36	506203	(MWH PFC)	PFBA-C13	114	%		1
	02/03/2009 22:36	506203	(MWH PFC)	PFOA-C13	80	%		1
	02/03/2009 22:36	506203	(MWH PFC)	PFOS-C13	51	%		1
L10 Composite (200902030009)					**Sampled on**	**02/02/2009 0000**		
			MWH PFC - Perfluorinated compounds					
	02/03/2009 22:46	506203	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/03/2009 22:46	506203	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	02/03/2009 22:46	506203	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	02/03/2009 22:46	506203	(MWH PFC)	PFBA-C13	77	%		1
	02/03/2009 22:46	506203	(MWH PFC)	PFOA-C13	75	%		1
	02/03/2009 22:46	506203	(MWH PFC)	PFOS-C13	48	%		1
			EPA 1625MOD - Nitrosamines by CLLE					
2/9/2009	02/10/2009	506369	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	15	ng/l	2	1
2/9/2009	02/10/2009	506369	(EPA 1625MOD)	NDMA-D6	59	%		1
MW1 (200902030010)					**Sampled on**	**02/02/2009 1155**		
			MWH PFC - Perfluorinated compounds					
	02/03/2009 22:56	506203	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/03/2009 22:56	506203	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	02/03/2009 22:56	506203	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	02/03/2009 22:56	506203	(MWH PFC)	PFBA-C13	91	%		1
	02/03/2009 22:56	506203	(MWH PFC)	PFOA-C13	88	%		1
	02/03/2009 22:56	506203	(MWH PFC)	PFOS-C13	60	%		1
			EPA 1625MOD - Nitrosamines by CLLE					
2/9/2009	02/10/2009	506369	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
2/9/2009	02/10/2009	506369	(EPA 1625MOD)	NDMA-D6	71	%		1

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
02/03/2009

MW2 (200902030011) **Sampled on 02/02/2009 1025**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/03/2009 23:06	506203	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/03/2009 23:06	506203	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	02/03/2009 23:06	506203	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	02/03/2009 23:06	506203	(MWH PFC)	PFBA-C13	84	%		1
	02/03/2009 23:06	506203	(MWH PFC)	PFOA-C13	77	%		1
	02/03/2009 23:06	506203	(MWH PFC)	PFOS-C13	61	%		1

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
2/9/2009	02/10/2009	506369	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
2/9/2009	02/10/2009	506369	(EPA 1625MOD)	NDMA-D6	86	%		1

MW3 (200902030012) **Sampled on 02/02/2009 0835**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/03/2009 23:16	506203	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/03/2009 23:16	506203	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	02/03/2009 23:16	506203	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	02/03/2009 23:16	506203	(MWH PFC)	PFBA-C13	76	%		1
	02/03/2009 23:16	506203	(MWH PFC)	PFOA-C13	78	%		1
	02/03/2009 23:16	506203	(MWH PFC)	PFOS-C13	50	%		1

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
2/9/2009	02/11/2009	506369	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
2/9/2009	02/11/2009	506369	(EPA 1625MOD)	NDMA-D6	94	%		1

MW4 (200902030013) **Sampled on 02/02/2009 0935**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/03/2009 23:26	506203	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/03/2009 23:26	506203	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	02/03/2009 23:26	506203	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	02/03/2009 23:26	506203	(MWH PFC)	PFBA-C13	91	%		1
	02/03/2009 23:26	506203	(MWH PFC)	PFOA-C13	82	%		1
	02/03/2009 23:26	506203	(MWH PFC)	PFOS-C13	50	%		1

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
02/03/2009

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
2/9/2009	02/11/2009	506369	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
2/9/2009	02/11/2009	506369	(EPA 1625MOD)	NDMA-D6	72	%		1

Source (200902030014) **Sampled on 02/02/2009 1045**

EPA 300 (Mod) - EDTA by Ion Chrom-Subcontract

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/19/2009		(EPA 300 (Mod))	EDTA by Ion Chrom-Subcontract	ND	ug/L	100	1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	02/03/2009 23:36	506203	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	02/03/2009 23:36	506203	(MWH PFC)	Perfluoro octanesulfonate-PFOS	78	ng/L	5	1
	02/03/2009 23:36	506203	(MWH PFC)	Perfluoro octanoic acid - PFOA	43	ng/L	5	1
	02/03/2009 23:36	506203	(MWH PFC)	PFBA-C13	105	%		1
	02/03/2009 23:36	506203	(MWH PFC)	PFOA-C13	82	%		1
	02/03/2009 23:36	506203	(MWH PFC)	PFOS-C13	27	%		1

EPA 525.2 - Semivolatiles by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Aldrin	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Benzo(g,h,i)Perylene	ND (L3)	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1

Rounding on totals after summation.
(c) - indicates calculated results

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
02/03/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Dibenz(a,h)Anthracene	ND (L3)	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Heptachlor	ND	ug/L	0.03	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND (L3)	ug/L	0.05	1

Rounding on totals after summation.
(c) - indicates calculated results

Locus Technologies
Norman Wong
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Samples Received on:
02/03/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Pendimethalin	ND (L3)	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Thiobencarb	ND	ug/L	0.2	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	100	%		1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Perylene-d12	96	%		1
2/4/2009	02/07/2009 2:43	505764	(EPA 525.2)	Triphenylphosphate	103	%		1

EPA 1625MOD - Nitrosamines by CLLE

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
2/9/2009	02/13/2009 03:38	506950	(EPA 1625MOD)	N-Nitroso dimethylamine (NDMA)	460	ng/l	8	4
2/9/2009	02/13/2009 03:38	506950	(EPA 1625MOD)	NDMA-D6	96	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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1 800 566 LABS (1 800 566 5227)

Laboratory Comments
Report: #303170

Locus Technologies
Norman Wong
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Flags Legend:

L3 - The associated blank spike recovery was above method acceptance limits.

Group Comments

PFOS-c13 surrogate recovery was low. However, data is acceptable based on passing LCS and result correction using Isotope Dilution

Semivolatiles (EPA 525.2) data is acceptable based on passing LCS1 and other QC.

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Laboratory
QC Summary: 303170

Locus Technologies

QC Ref # 505764 - Semivolatiles by GCMS **Analysis Date: 02/07/2009**

200902030014	Source	Analyzed by: PAC

QC Ref # 506203 - Perfluorinated compounds **Analysis Date: 02/03/2009**

200902030008	L5 Composite	Analyzed by: ALI
200902030009	L10 Composite	Analyzed by: ALI
200902030010	MW1	Analyzed by: ALI
200902030011	MW2	Analyzed by: ALI
200902030012	MW3	Analyzed by: ALI
200902030013	MW4	Analyzed by: ALI
200902030014	Source	Analyzed by: ALI

QC Ref # 506369 - Nitrosamines by CLLE **Analysis Date: 02/10/2009**

200902030009	L10 Composite	Analyzed by: DLO
200902030010	MW1	Analyzed by: DLO
200902030011	MW2	Analyzed by: DLO
200902030012	MW3	Analyzed by: DLO
200902030013	MW4	Analyzed by: DLO

QC Ref # 506950 - Nitrosamines by CLLE **Analysis Date: 02/13/2009**

200902030014	Source	Analyzed by: DLO

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Laboratory
QC Report: 303170

Locus Technologies

QC Ref# 505764 - Semivolatiles by GCMS by EPA 525.2

Analysis Date: 02/07/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,3-Dimethyl-2-nitrobenzene (S)				%	97	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)				%	100	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)				%	96	(70-130)		
MRLHI	1,3-Dimethyl-2-nitrobenzene (S)				%	97	(70-130)		
MS_200901300049	1,3-Dimethyl-2-nitrobenzene (S)				%	95	(70-130)		
LCS1	2,4-Dinitrotoluene		2.0	1.92	ug/L	96	(70-130)		
LCS2	2,4-Dinitrotoluene		2.0	1.97	ug/L	98	(70-130)	20	2.6
MBLK	2,4-Dinitrotoluene			<0.1	ug/L				
MRLHI	2,4-Dinitrotoluene		0.1	0.100	ug/L	100	(50-150)		
MS_200901300049	2,4-Dinitrotoluene	ND	2.0	2.03	ug/L	102	(70-130)		
LCS1	2,6-Dinitrotoluene		2.0	1.87	ug/L	94	(70-130)		
LCS2	2,6-Dinitrotoluene		2.0	1.98	ug/L	99	(70-130)	20	5.7
MBLK	2,6-Dinitrotoluene			<0.1	ug/L				
MRLHI	2,6-Dinitrotoluene		0.1	0.0670	ug/L	67	(50-150)		
MS_200901300049	2,6-Dinitrotoluene	ND	2.0	1.99	ug/L	99	(70-130)		
LCS1	4,4-DDD		2.0	2.19	ug/L	109	(70-130)		
LCS2	4,4-DDD		2.0	2.4	ug/L	120	(70-130)	20	9.2
MBLK	4,4-DDD			<0.1	ug/L				
MRLHI	4,4-DDD		0.1	0.0840	ug/L	84	(50-150)		
MS_200901300049	4,4-DDD	ND	2.0	2.07	ug/L	104	(70-130)		
LCS1	4,4-DDE		2.0	2.00	ug/L	100	(70-130)		
LCS2	4,4-DDE		2.0	2.22	ug/L	111	(70-130)	20	10
MBLK	4,4-DDE			<0.1	ug/L				
MRLHI	4,4-DDE		0.1	0.0970	ug/L	97	(50-150)		
MS_200901300049	4,4-DDE	ND	2.0	1.82	ug/L	91	(70-130)		
LCS1	4,4-DDT		2.0	2.21	ug/L	110	(70-130)		
LCS2	4,4-DDT		2.0	2.33	ug/L	116	(70-130)	20	5.3
MBLK	4,4-DDT			<0.1	ug/L				
MRLHI	4,4-DDT		0.1	0.0870	ug/L	87	(50-150)		
MS_200901300049	4,4-DDT	ND	2.0	2.02	ug/L	101	(70-130)		
LCS1	Acenaphthene		2.0	2.07	ug/L	103	(70-130)		
LCS2	Acenaphthene		2.0	2.22	ug/L	111	(70-130)	20	7.0
MBLK	Acenaphthene			<0.1	ug/L				
MRLHI	Acenaphthene		0.1	0.104	ug/L	104	(50-150)		
MS_200901300049	Acenaphthene	ND	2.0	2.07	ug/L	104	(70-130)		
LCS1	Acenaphthylene		2.0	2.14	ug/L	107	(70-130)		
LCS2	Acenaphthylene		2.0	2.17	ug/L	109	(70-130)	20	1.4
MBLK	Acenaphthylene			<0.1	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Acenaphthylene		0.1	0.101	ug/L	101	(50-150)		
MS_200901300049	Acenaphthylene	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Acetochlor		2.0	2.15	ug/L	107	(70-130)		
LCS2	Acetochlor		2.0	2.46	ug/L	123	(70-130)	20	13
MBLK	Acetochlor			<0.1	ug/L				
MRLHI	Acetochlor		0.1	0.0870	ug/L	87	(50-150)		
MS_200901300049	Acetochlor	ND	2.0	2.18	ug/L	109	(70-130)		
LCS1	Alachlor		2.0	2.15	ug/L	108	(70-130)		
LCS2	Alachlor		2.0	2.42	ug/L	121	(70-130)	20	12
MBLK	Alachlor			<0.05	ug/L				
MRLHI	Alachlor		0.1	0.106	ug/L	106	(50-150)		
MS_200901300049	Alachlor	ND	2.0	2.18	ug/L	109	(70-130)		
LCS1	Aldrin		2.0	1.81	ug/L	91	(70-130)		
LCS2	Aldrin		2.0	2.02	ug/L	101	(70-130)	20	11
MBLK	Aldrin			<0.05	ug/L				
MRLHI	Aldrin		0.1	0.0760	ug/L	76	(50-150)		
MS_200901300049	Aldrin	ND	2.0	1.75	ug/L	87	(70-130)		
LCS1	Alpha-BHC		2.0	2.1	ug/L	105	(70-130)		
LCS2	Alpha-BHC		2.0	2.18	ug/L	109	(70-130)	20	3.3
MBLK	Alpha-BHC			<0.1	ug/L				
MRLHI	Alpha-BHC		0.1	0.0940	ug/L	94	(50-150)		
MS_200901300049	Alpha-BHC	ND	2.0	2.15	ug/L	107	(70-130)		
LCS1	alpha-Chlordane		2.0	2.00	ug/L	100	(70-130)		
LCS2	alpha-Chlordane		2.0	2.32	ug/L	116	(70-130)	20	15
MBLK	alpha-Chlordane			<0.05	ug/L				
MRLHI	alpha-Chlordane		0.1	0.0940	ug/L	94	(50-150)		
MS_200901300049	alpha-Chlordane	ND	2.0	1.9	ug/L	95	(70-130)		
LCS1	Anthracene		2.0	2.09	ug/L	105	(70-130)		
LCS2	Anthracene		2.0	2.2	ug/L	110	(70-130)	20	5.1
MBLK	Anthracene			<0.02	ug/L				
MRLHI	Anthracene		0.1	0.0900	ug/L	90	(50-150)		
MS_200901300049	Anthracene	ND	2.0	1.83	ug/L	92	(70-130)		
LCS1	Atrazine		2.0	2.21	ug/L	111	(70-130)		
LCS2	Atrazine		2.0	2.42	ug/L	121	(70-130)	20	9.1
MBLK	Atrazine			<0.05	ug/L				
MRLHI	Atrazine		0.1	0.0840	ug/L	84	(50-150)		
MS_200901300049	Atrazine	ND	2.0	2.33	ug/L	116	(70-130)		
LCS1	Benz(a)Anthracene		2.0	2.11	ug/L	105	(70-130)		
LCS2	Benz(a)Anthracene		2.0	2.27	ug/L	113	(70-130)	20	7.3

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Benz(a)Anthracene			<0.05	ug/L				
MRLHI	Benz(a)Anthracene		0.1	0.0920	ug/L	92	(50-150)		
MS_200901300049	Benz(a)Anthracene	ND	2.0	2.05	ug/L	103	(70-130)		
LCS1	Benzo(a)pyrene		2.0	2.3	ug/L	115	(70-130)		
LCS2	Benzo(a)pyrene		2.0	2.39	ug/L	120	(70-130)	20	3.8
MBLK	Benzo(a)pyrene			<0.02	ug/L				
MRLHI	Benzo(a)pyrene		0.1	0.0900	ug/L	90	(50-150)		
MS_200901300049	Benzo(a)pyrene	ND	2.0	2.08	ug/L	104	(70-130)		
LCS1	Benzo(b)Fluoranthene		2.0	2.33	ug/L	117	(70-130)		
LCS2	Benzo(b)Fluoranthene		2.0	2.39	ug/L	120	(70-130)	20	2.5
MBLK	Benzo(b)Fluoranthene			<0.02	ug/L				
MRLHI	Benzo(b)Fluoranthene		0.1	0.0940	ug/L	94	(50-150)		
MS_200901300049	Benzo(b)Fluoranthene	ND	2.0	2.18	ug/L	109	(70-130)		
LCS1	Benzo(g,h,i)Perylene		2.0	2.26	ug/L	113	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2.0	2.6	ug/L	130	(70-130)	20	14
MBLK	Benzo(g,h,i)Perylene			<0.05	ug/L				
MRLHI	Benzo(g,h,i)Perylene		0.1	0.103	ug/L	103	(50-150)		
MS_200901300049	Benzo(g,h,i)Perylene	ND	2.0	1.85	ug/L	92	(70-130)		
LCS1	Benzo(k)Fluoranthene		2.0	2.32	ug/L	116	(70-130)		
LCS2	Benzo(k)Fluoranthene		2.0	2.46	ug/L	123	(70-130)	20	6.3
MBLK	Benzo(k)Fluoranthene			<0.02	ug/L				
MRLHI	Benzo(k)Fluoranthene		0.1	0.104	ug/L	104	(50-150)		
MS_200901300049	Benzo(k)Fluoranthene	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Beta-BHC		2.0	2.05	ug/L	103	(70-130)		
LCS2	Beta-BHC		2.0	2.19	ug/L	109	(70-130)	20	6.6
MBLK	Beta-BHC			<0.1	ug/L				
MRLHI	Beta-BHC		0.1	0.109	ug/L	109	(50-150)		
MS_200901300049	Beta-BHC	ND	2.0	2.13	ug/L	107	(70-130)		
LCS1	Bromacil		2.0	2.18	ug/L	109	(70-130)		
LCS2	Bromacil		2.0	2.36	ug/L	118	(70-130)	20	7.9
MBLK	Bromacil			<0.2	ug/L				
MRLHI	Bromacil		0.1	0.100	ug/L	100	(50-150)		
MS_200901300049	Bromacil	ND	2.0	2.29	ug/L	114	(70-130)		
LCS1	Butachlor		2.0	2.17	ug/L	109	(70-130)		
LCS2	Butachlor		2.0	2.44	ug/L	122	(70-130)	20	12
MBLK	Butachlor			<0.05	ug/L				
MRLHI	Butachlor		0.1	0.0950	ug/L	95	(50-150)		
MS_200901300049	Butachlor	ND	2.0	2.26	ug/L	113	(70-130)		
LCS1	Butylbenzylphthalate		2.0	2.23	ug/L	111	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Butylbenzylphthalate		2.0	2.5	ug/L	125	(70-130)	20	12
MBLK	Butylbenzylphthalate			<0.5	ug/L				
MRLHI	Butylbenzylphthalate		0.3	0.312	ug/L	104	(50-150)		
MS_200901300049	Butylbenzylphthalate	ND	2.0	2.28	ug/L	114	(70-130)		
LCS1	Caffeine by method 525mod		2.0	1.63	ug/L	82	(45-137)		
LCS2	Caffeine by method 525mod		2.0	1.83	ug/L	91	(45-137)	20	12
MBLK	Caffeine by method 525mod			<0.05	ug/L				
MRLHI	Caffeine by method 525mod		0.1	0.0800	ug/L	80	(50-150)		
MS_200901300049	Caffeine by method 525mod	ND	2.0	1.93	ug/L	97	(46-144)		
LCS1	Chlorobenzilate		2.0	2.26	ug/L	113	(70-130)		
LCS2	Chlorobenzilate		2.0	2.52	ug/L	126	(70-130)	20	11
MBLK	Chlorobenzilate			<0.1	ug/L				
MRLHI	Chlorobenzilate		0.1	0.0780	ug/L	78	(50-150)		
MS_200901300049	Chlorobenzilate	ND	2.0	2.23	ug/L	112	(70-130)		
LCS1	Chloroneb		2.0	2.13	ug/L	106	(70-130)		
LCS2	Chloroneb		2.0	2.22	ug/L	111	(70-130)	20	4.1
MBLK	Chloroneb			<0.1	ug/L				
MRLHI	Chloroneb		0.1	0.108	ug/L	108	(50-150)		
MS_200901300049	Chloroneb	ND	2.0	2.18	ug/L	109	(70-130)		
LCS1	Chlorothalonil(Draconil,Bravo)		2.0	2.15	ug/L	108	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2.0	2.32	ug/L	116	(70-130)	20	7.6
MBLK	Chlorothalonil(Draconil,Bravo)			<0.1	ug/L				
MRLHI	Chlorothalonil(Draconil,Bravo)		0.1	0.0940	ug/L	94	(50-150)		
MS_200901300049	Chlorothalonil(Draconil,Bravo)	ND	2.0	2.2	ug/L	110	(70-130)		
LCS1	Chlorpyrifos (Dursban)		2.0	2.11	ug/L	106	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2.0	2.38	ug/L	119	(70-130)	20	12
MBLK	Chlorpyrifos (Dursban)			<0.05	ug/L				
MRLHI	Chlorpyrifos (Dursban)		0.1	0.0860	ug/L	86	(50-150)		
MS_200901300049	Chlorpyrifos (Dursban)	ND	2.0	2.11	ug/L	106	(70-130)		
LCS1	Chrysene		2.0	2.19	ug/L	109	(70-130)		
LCS2	Chrysene		2.0	2.32	ug/L	116	(70-130)	20	5.8
MBLK	Chrysene			<0.02	ug/L				
MRLHI	Chrysene		0.1	0.0960	ug/L	96	(50-150)		
MS_200901300049	Chrysene	ND	2.0	2.18	ug/L	109	(70-130)		
LCS1	Delta-BHC		2.0	2.01	ug/L	100	(70-130)		
LCS2	Delta-BHC		2.0	2.32	ug/L	116	(70-130)	20	14
MBLK	Delta-BHC			<0.1	ug/L				
MRLHI	Delta-BHC		0.1	0.104	ug/L	104	(50-150)		
MS_200901300049	Delta-BHC	ND	2.0	2.12	ug/L	106	(70-130)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Di(2-Ethylhexyl)phthalate		2.0	2.13	ug/L	107	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2.0	2.35	ug/L	118	(70-130)	20	9.3
MBLK	Di(2-Ethylhexyl)phthalate			<0.6	ug/L				
MRLHI	Di(2-Ethylhexyl)phthalate		0.3	0.345	ug/L	115	(50-150)		
MS_200901300049	Di(2-Ethylhexyl)phthalate	ND	2.0	1.9	ug/L	95	(70-130)		
LCS1	Di-(2-Ethylhexyl)adipate		2.0	2.17	ug/L	108	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2.0	2.4	ug/L	120	(70-130)	20	10
MBLK	Di-(2-Ethylhexyl)adipate			<0.6	ug/L				
MRLHI	Di-(2-Ethylhexyl)adipate		0.3	0.278	ug/L	93	(50-150)		
MS_200901300049	Di-(2-Ethylhexyl)adipate	ND	2.0	1.94	ug/L	97	(70-130)		
LCS1	Di-n-Butylphthalate		4.0	4.1	ug/L	102	(70-130)		
LCS2	Di-n-Butylphthalate		4.0	4.61	ug/L	115	(70-130)	20	12
MBLK	Di-n-Butylphthalate			<1	ug/L				
MRLHI	Di-n-Butylphthalate		0.4	0.437	ug/L	109	(50-150)		
MS_200901300049	Di-n-Butylphthalate	ND	4.0	4.11	ug/L	103	(70-130)		
LCS1	Di-N-octylphthalate		2.0	1.94	ug/L	97	(70-130)		
LCS2	Di-N-octylphthalate		2.0	2.17	ug/L	108	(70-130)	20	11
MBLK	Di-N-octylphthalate			<0.1	ug/L				
MRLHI	Di-N-octylphthalate		0.1	0.103	ug/L	103	(50-150)		
MS_200901300049	Di-N-octylphthalate	ND	2.0	1.62	ug/L	81	(70-130)		
LCS1	Diazinon (Qualitative)		2.0	2.11	ug/L	106	(70-130)		
LCS2	Diazinon (Qualitative)		2.0	2.34	ug/L	117	(70-130)	20	10
MBLK	Diazinon (Qualitative)			<0.1	ug/L				
MRLHI	Diazinon (Qualitative)		0.1	0.0750	ug/L	75	(50-150)		
MS_200901300049	Diazinon (Qualitative)	ND	2.0	2.16	ug/L	108	(70-130)		
LCS1	Dibenz(a,h)Anthracene		2.0	2.37	ug/L	119	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2.0	2.81	ug/L	**141**	(70-130)	20	17
MBLK	Dibenz(a,h)Anthracene			<0.05	ug/L				
MRLHI	Dibenz(a,h)Anthracene		0.1	0.0910	ug/L	91	(50-150)		
MS_200901300049	Dibenz(a,h)Anthracene	ND	2.0	1.92	ug/L	96	(70-130)		
LCS1	Dichlorvos (DDVP)		2.0	2.31	ug/L	116	(70-130)		
LCS2	Dichlorvos (DDVP)		2.0	2.42	ug/L	121	(70-130)	20	4.7
MBLK	Dichlorvos (DDVP)			<0.05	ug/L				
MRLHI	Dichlorvos (DDVP)		0.1	0.0940	ug/L	94	(50-150)		
MS_200901300049	Dichlorvos (DDVP)	ND	2.0	2.24	ug/L	112	(70-130)		
LCS1	Dieldrin		2.0	2.07	ug/L	104	(70-130)		
LCS2	Dieldrin		2.0	2.37	ug/L	118	(70-130)	20	14
MBLK	Dieldrin			<0.2	ug/L				
MRLHI	Dieldrin		0.1	0.0970	ug/L	97	(50-150)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200901300049	Dieldrin	ND	2.0	2.02	ug/L	101	(70-130)		
LCS1	Diethylphthalate		2.0	2.22	ug/L	111	(70-130)		
LCS2	Diethylphthalate		2.0	2.3	ug/L	115	(70-130)	20	3.5
MBLK	Diethylphthalate			<0.5	ug/L				
MRLHI	Diethylphthalate		0.3	0.330	ug/L	110	(50-150)		
MS_200901300049	Diethylphthalate	ND	2.0	2.27	ug/L	113	(70-130)		
LCS1	Dimethoate		2.0	1.45	ug/L	73	(35-100)		
LCS2	Dimethoate		2.0	1.44	ug/L	72	(35-100)	20	0.69
MBLK	Dimethoate			<0.1	ug/L				
MRLHI	Dimethoate		0.1	0.0630	ug/L	63	(50-150)		
MS_200901300049	Dimethoate	ND	2.0	1.6	ug/L	80	(34-111)		
LCS1	Dimethylphthalate		2.0	2.19	ug/L	109	(70-130)		
LCS2	Dimethylphthalate		2.0	2.36	ug/L	118	(70-130)	20	7.5
MBLK	Dimethylphthalate			<0.5	ug/L				
MRLHI	Dimethylphthalate		0.3	0.331	ug/L	110	(50-150)		
MS_200901300049	Dimethylphthalate	ND	2.0	2.26	ug/L	113	(70-130)		
LCS1	Endosulfan I (Alpha)		2.0	2.02	ug/L	101	(70-130)		
LCS2	Endosulfan I (Alpha)		2.0	2.3	ug/L	115	(70-130)	20	13
MBLK	Endosulfan I (Alpha)			<0.1	ug/L				
MRLHI	Endosulfan I (Alpha)		0.1	0.0800	ug/L	80	(50-150)		
MS_200901300049	Endosulfan I (Alpha)	ND	2.0	1.99	ug/L	100	(70-130)		
LCS1	Endosulfan II (Beta)		2.0	1.99	ug/L	100	(70-130)		
LCS2	Endosulfan II (Beta)		2.0	2.42	ug/L	121	(70-130)	20	20
MBLK	Endosulfan II (Beta)			<0.1	ug/L				
MRLHI	Endosulfan II (Beta)		0.1	0.104	ug/L	104	(50-150)		
MS_200901300049	Endosulfan II (Beta)	ND	2.0	2.1	ug/L	105	(70-130)		
LCS1	Endosulfan Sulfate		2.0	2.05	ug/L	102	(70-130)		
LCS2	Endosulfan Sulfate		2.0	2.37	ug/L	118	(70-130)	20	15
MBLK	Endosulfan Sulfate			<0.1	ug/L				
MRLHI	Endosulfan Sulfate		0.1	0.0800	ug/L	80	(50-150)		
MS_200901300049	Endosulfan Sulfate	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Endrin		2.0	2.16	ug/L	108	(70-130)		
LCS2	Endrin		2.0	2.38	ug/L	119	(70-130)	20	10
MBLK	Endrin			<0.2	ug/L				
MRLHI	Endrin		0.1	0.0790	ug/L	79	(50-150)		
MS_200901300049	Endrin	ND	2.0	2.25	ug/L	112	(70-130)		
LCS1	Endrin Aldehyde		2.0	2.00	ug/L	100	(70-130)		
LCS2	Endrin Aldehyde		2.0	2.19	ug/L	109	(70-130)	20	9.1
MBLK	Endrin Aldehyde			<0.1	ug/L				

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Endrin Aldehyde		0.1	0.0870	ug/L	87	(50-150)		
MS_200901300049	Endrin Aldehyde	ND	2.0	1.87	ug/L	94	(70-130)		
LCS1	EPTC		2.0	2.12	ug/L	106	(70-130)		
LCS2	EPTC		2.0	2.36	ug/L	118	(70-130)	20	11
MBLK	EPTC			<0.1	ug/L				
MRLHI	EPTC		0.1	0.104	ug/L	104	(50-150)		
MS_200901300049	EPTC	ND	2.0	2.12	ug/L	106	(70-130)		
LCS1	Fluoranthene		2.0	2.09	ug/L	105	(70-130)		
LCS2	Fluoranthene		2.0	2.3	ug/L	115	(70-130)	20	9.6
MBLK	Fluoranthene			<0.1	ug/L				
MRLHI	Fluoranthene		0.1	0.0990	ug/L	99	(50-150)		
MS_200901300049	Fluoranthene	ND	2.0	2.12	ug/L	106	(70-130)		
LCS1	Fluorene		2.0	2.21	ug/L	111	(70-130)		
LCS2	Fluorene		2.0	2.3	ug/L	115	(70-130)	20	4.0
MBLK	Fluorene			<0.05	ug/L				
MRLHI	Fluorene		0.1	0.102	ug/L	102	(50-150)		
MS_200901300049	Fluorene	ND	2.0	2.21	ug/L	111	(70-130)		
LCS1	gamma-Chlordane		2.0	2.1	ug/L	105	(70-130)		
LCS2	gamma-Chlordane		2.0	2.29	ug/L	114	(70-130)	20	8.7
MBLK	gamma-Chlordane			<0.05	ug/L				
MRLHI	gamma-Chlordane		0.1	0.100	ug/L	100	(50-150)		
MS_200901300049	gamma-Chlordane	ND	2.0	1.9	ug/L	95	(70-130)		
LCS1	Heptachlor		2.0	1.99	ug/L	100	(70-130)		
LCS2	Heptachlor		2.0	2.17	ug/L	109	(70-130)	20	8.7
MBLK	Heptachlor			<0.03	ug/L				
MRLHI	Heptachlor		0.1	0.0810	ug/L	81	(50-150)		
MS_200901300049	Heptachlor	ND	2.0	1.98	ug/L	99	(70-130)		
LCS1	Heptachlor Epoxide (isomer B)		2.0	1.98	ug/L	99	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2.0	2.34	ug/L	117	(70-130)	20	17
MBLK	Heptachlor Epoxide (isomer B)			<0.05	ug/L				
MRLHI	Heptachlor Epoxide (isomer B)		0.1	0.100	ug/L	100	(50-150)		
MS_200901300049	Heptachlor Epoxide (isomer B)	ND	2.0	2.03	ug/L	102	(70-130)		
LCS1	Hexachlorobenzene		2.0	2.1	ug/L	105	(70-130)		
LCS2	Hexachlorobenzene		2.0	2.19	ug/L	110	(70-130)	20	4.2
MBLK	Hexachlorobenzene			<0.05	ug/L				
MRLHI	Hexachlorobenzene		0.3	0.318	ug/L	106	(50-150)		
MS_200901300049	Hexachlorobenzene	ND	2.0	2.11	ug/L	105	(70-130)		
LCS1	Hexachlorocyclopentadiene		2.0	1.94	ug/L	97	(70-130)		
LCS2	Hexachlorocyclopentadiene		2.0	2.07	ug/L	103	(70-130)	20	6.5

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Hexachlorocyclopentadiene			<0.05	ug/L				
MRLHI	Hexachlorocyclopentadiene		0.3	0.318	ug/L	106	(50-150)		
MS_200901300049	Hexachlorocyclopentadiene	ND	2.0	1.94	ug/L	97	(70-130)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2.0	2.39	ug/L	120	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2.0	2.69	ug/L	**134**	(70-130)	20	12
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.05	ug/L				
MRLHI	Indeno(1,2,3,c,d)Pyrene		0.1	0.0880	ug/L	88	(50-150)		
MS_200901300049	Indeno(1,2,3,c,d)Pyrene	ND	2.0	1.97	ug/L	99	(70-130)		
LCS1	Isophorone		2.0	2.05	ug/L	103	(70-130)		
LCS2	Isophorone		2.0	2.31	ug/L	116	(70-130)	20	12
MBLK	Isophorone			<0.5	ug/L				
MRLHI	Isophorone		0.1	0.112	ug/L	112	(50-150)		
MS_200901300049	Isophorone	ND	2.0	2.08	ug/L	104	(70-130)		
LCS1	Lindane		2.0	2.11	ug/L	105	(70-130)		
LCS2	Lindane		2.0	2.2	ug/L	110	(70-130)	20	4.2
MBLK	Lindane			<0.04	ug/L				
MRLHI	Lindane		0.1	0.114	ug/L	114	(50-150)		
MS_200901300049	Lindane	ND	2.0	2.19	ug/L	110	(70-130)		
LCS1	Malathion		2.0	2.21	ug/L	111	(70-130)		
LCS2	Malathion		2.0	2.51	ug/L	125	(70-130)	20	13
MBLK	Malathion			<0.1	ug/L				
MRLHI	Malathion		0.1	0.0890	ug/L	89	(50-150)		
MS_200901300049	Malathion	ND	2.0	2.11	ug/L	105	(70-130)		
LCS1	Methoxychlor		2.0	2.29	ug/L	115	(70-130)		
LCS2	Methoxychlor		2.0	2.44	ug/L	122	(70-130)	20	6.3
MBLK	Methoxychlor			<0.1	ug/L				
MRLHI	Methoxychlor		0.1	0.0920	ug/L	92	(50-150)		
MS_200901300049	Methoxychlor	ND	2.0	2.39	ug/L	120	(70-130)		
LCS1	Metolachlor		2.0	2.13	ug/L	107	(70-130)		
LCS2	Metolachlor		2.0	2.44	ug/L	122	(70-130)	20	14
MBLK	Metolachlor			<0.05	ug/L				
MRLHI	Metolachlor		0.1	0.102	ug/L	102	(50-150)		
MS_200901300049	Metolachlor	ND	2.0	2.21	ug/L	110	(70-130)		
LCS1	Metribuzin		2.0	2.03	ug/L	102	(70-130)		
LCS2	Metribuzin		2.0	2.24	ug/L	112	(70-130)	20	9.8
MBLK	Metribuzin			<0.05	ug/L				
MRLHI	Metribuzin		0.1	0.0870	ug/L	87	(50-150)		
MS_200901300049	Metribuzin	ND	2.0	2.18	ug/L	109	(70-130)		
LCS1	Molinate		2.0	2.23	ug/L	112	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Molinate		2.0	2.37	ug/L	119	(70-130)	20	6.1
MBLK	Molinate			<0.1	ug/L				
MRLHI	Molinate		0.1	0.109	ug/L	109	(50-150)		
MS_200901300049	Molinate	ND	2.0	2.22	ug/L	111	(70-130)		
LCS1	Naphthalene		2.0	2.01	ug/L	101	(70-130)		
LCS2	Naphthalene		2.0	2.17	ug/L	109	(70-130)	20	7.7
MBLK	Naphthalene			<0.3	ug/L				
MRLHI	Naphthalene		0.1	0.108	ug/L	108	(50-150)		
MS_200901300049	Naphthalene	ND	2.0	2.02	ug/L	101	(70-130)		
LCS1	Parathion		2.0	2.29	ug/L	114	(70-130)		
LCS2	Parathion		2.0	2.6	ug/L	130	(70-130)	20	13
MBLK	Parathion			<0.1	ug/L				
MRLHI	Parathion		0.1	0.0710	ug/L	71	(50-150)		
MS_200901300049	Parathion	ND	2.0	2.33	ug/L	116	(70-130)		
LCS1	Pendimethalin		2.0	2.41	ug/L	121	(70-130)		
LCS2	Pendimethalin		2.0	2.63	ug/L	**131**	(70-130)	20	8.7
MBLK	Pendimethalin			<0.1	ug/L				
MRLHI	Pendimethalin		0.1	0.0830	ug/L	83	(50-150)		
MS_200901300049	Pendimethalin	ND	2.0	2.44	ug/L	122	(70-130)		
LCS1	Pentachlorophenol		8.0	9.14	ug/L	114	(70-130)		
LCS2	Pentachlorophenol		8.0	8.85	ug/L	111	(70-130)	20	3.2
MBLK	Pentachlorophenol			<1	ug/L				
MRLHI	Pentachlorophenol		1.2	1.03	ug/L	86	(50-150)		
MS_200901300049	Pentachlorophenol	ND	8.0	8.62	ug/L	108	(70-130)		
LCS1	Permethrin (mixed isomers)		4.0	4.51	ug/L	113	(70-130)		
LCS2	Permethrin (mixed isomers)		4.0	4.93	ug/L	123	(70-130)	20	8.9
MBLK	Permethrin (mixed isomers)			<0.1	ug/L				
MRLHI	Permethrin (mixed isomers)		0.2	0.170	ug/L	85	(50-150)		
MS_200901300049	Permethrin (mixed isomers)	ND	4.0	4.18	ug/L	105	(70-130)		
LCS1	Perylene-d12 (S)				%	100	(70-130)		
LCS2	Perylene-d12 (S)				%	102	(70-130)		
MBLK	Perylene-d12 (S)				%	86	(70-130)		
MRLHI	Perylene-d12 (S)				%	85	(70-130)		
MS_200901300049	Perylene-d12 (S)				%	90	(70-130)		
LCS1	Phenanthrene		2.0	2.06	ug/L	103	(70-130)		
LCS2	Phenanthrene		2.0	2.21	ug/L	110	(70-130)	20	7.0
MBLK	Phenanthrene			<0.04	ug/L				
MRLHI	Phenanthrene		0.1	0.0910	ug/L	91	(50-150)		
MS_200901300049	Phenanthrene	ND	2.0	2.1	ug/L	105	(70-130)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Propachlor		2.0	2.16	ug/L	108	(70-130)		
LCS2	Propachlor		2.0	2.22	ug/L	111	(70-130)	20	2.7
MBLK	Propachlor			<0.05	ug/L				
MRLHI	Propachlor		0.1	0.100	ug/L	100	(50-150)		
MS_200901300049	Propachlor	ND	2.0	2.17	ug/L	108	(70-130)		
LCS1	Pyrene		2.0	2.12	ug/L	106	(70-130)		
LCS2	Pyrene		2.0	2.29	ug/L	114	(70-130)	20	7.7
MBLK	Pyrene			<0.05	ug/L				
MRLHI	Pyrene		0.1	0.100	ug/L	100	(50-150)		
MS_200901300049	Pyrene	ND	2.0	2.12	ug/L	106	(70-130)		
LCS1	Simazine		2.0	2.15	ug/L	108	(70-130)		
LCS2	Simazine		2.0	2.33	ug/L	116	(70-130)	20	8.0
MBLK	Simazine			<0.05	ug/L				
MRLHI	Simazine		0.1	0.109	ug/L	109	(50-150)		
MS_200901300049	Simazine	ND	2.0	2.23	ug/L	112	(70-130)		
LCS1	Terbacil		2.0	2.39	ug/L	120	(70-130)		
LCS2	Terbacil		2.0	2.45	ug/L	122	(70-130)	20	2.5
MBLK	Terbacil			<0.1	ug/L				
MRLHI	Terbacil		0.1	0.0940	ug/L	94	(50-150)		
MS_200901300049	Terbacil	ND	2.0	2.34	ug/L	117	(70-130)		
LCS1	Terbuthylazine		2.0	2.27	ug/L	113	(70-130)		
LCS2	Terbuthylazine		2.0	2.46	ug/L	123	(70-130)	20	8.0
MBLK	Terbuthylazine			<0.1	ug/L				
MRLHI	Terbuthylazine		0.1	0.103	ug/L	103	(50-150)		
MS_200901300049	Terbuthylazine	ND	2.0	2.32	ug/L	116	(70-130)		
LCS1	Thiobencarb		2.0	2.16	ug/L	108	(70-130)		
LCS2	Thiobencarb		2.0	2.47	ug/L	123	(70-130)	20	13
MBLK	Thiobencarb			<0.2	ug/L				
MRLHI	Thiobencarb		0.1	0.0970	ug/L	97	(50-150)		
MS_200901300049	Thiobencarb	ND	2.0	2.17	ug/L	109	(70-130)		
LCS1	trans-Nonachlor		2.0	2.05	ug/L	102	(70-130)		
LCS2	trans-Nonachlor		2.0	2.24	ug/L	112	(70-130)	20	8.9
MBLK	trans-Nonachlor			<0.05	ug/L				
MRLHI	trans-Nonachlor		0.1	0.0820	ug/L	82	(50-150)		
MS_200901300049	trans-Nonachlor	ND	2.0	1.91	ug/L	96	(70-130)		
LCS1	Trifluralin		2.0	2.32	ug/L	116	(70-130)		
LCS2	Trifluralin		2.0	2.29	ug/L	114	(70-130)	20	1.3
MBLK	Trifluralin			<0.1	ug/L				
MRLHI	Trifluralin		0.1	0.0650	ug/L	65	(50-150)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200901300049	Trifluralin	ND	2.0	2.3	ug/L	115	(70-130)		
LCS1	Triphenylphosphate (S)				%	103	(70-130)		
LCS2	Triphenylphosphate (S)				%	107	(70-130)		
MBLK	Triphenylphosphate (S)				%	100	(70-130)		
MRLHI	Triphenylphosphate (S)				%	97	(70-130)		
MS_200901300049	Triphenylphosphate (S)				%	100	(70-130)		

QC Ref# 506203 - Perfluorinated compounds by MWH PFC **Analysis Date: 02/03/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluoro butanoic acid- PFBA		50	50.3	ng/L	101	(70-130)		
LCS2	Perfluoro butanoic acid- PFBA		50	47.3	ng/L	95	(70-130)	20	6.2
MBLK	Perfluoro butanoic acid- PFBA			<50	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		20	14.4	ng/L	72	(50-150)		
MS_200902230014	Perfluoro butanoic acid- PFBA	ND	50	48.7	ng/l	97	(50-150)		
MSD_200902230014	Perfluoro butanoic acid- PFBA	ND	50	45.5	ng/l	91	(50-150)	20	6.8
LCS1	Perfluoro octanesulfonate-PFOS		50	51.7	ng/L	103	(70-130)		
LCS2	Perfluoro octanesulfonate-PFOS		50	54.5	ng/L	109	(70-130)	20	5.3
MBLK	Perfluoro octanesulfonate-PFOS			<50	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		5.0	5.2	ng/L	104	(50-150)		
MS_200902230014	Perfluoro octanesulfonate-PFOS	ND	50	49.5	ng/l	98	(50-150)		
MSD_200902230014	Perfluoro octanesulfonate-PFOS	ND	50	47.3	ng/l	93	(50-150)	20	4.5
LCS1	Perfluoro octanoic acid - PFOA		50	49.5	ng/L	99	(70-130)		
LCS2	Perfluoro octanoic acid - PFOA		50	53.9	ng/L	108	(70-130)	20	8.5
MBLK	Perfluoro octanoic acid - PFOA			<20	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	3.64	ng/L	73	(50-150)		
MS_200902230014	Perfluoro octanoic acid - PFOA	ND	50	42.8	ng/l	86	(50-150)		
MSD_200902230014	Perfluoro octanoic acid - PFOA	ND	50	41.1	ng/l	82	(50-150)	20	4.0
LCS1	PFBA-C13 (I)			83.9	%	84	(50-150)		
LCS2	PFBA-C13 (I)			88.0	%	88	(50-150)		
MBLK	PFBA-C13 (I)			88.1	%	88	(50-150)		
MRL_CHK	PFBA-C13 (I)			77.4	%	77	(50-150)		
MS_200902230014	PFBA-C13 (I)			89.3	%	89	(50-150)		
MSD_200902230014	PFBA-C13 (I)			78.7	%	79	(50-150)		
LCS1	PFOA-C13 (I)			79.4	%	79	(50-150)		
LCS2	PFOA-C13 (I)			84.4	%	84	(50-150)		
MBLK	PFOA-C13 (I)			84.5	%	85	(50-150)		
MRL_CHK	PFOA-C13 (I)			83.3	%	83	(50-150)		
MS_200902230014	PFOA-C13 (I)			90.2	%	90	(50-150)		
MSD_200902230014	PFOA-C13 (I)			86.5	%	87	(50-150)		
LCS1	PFOS-C13 (I)			80.2	%	80	(50-150)		
LCS2	PFOS-C13 (I)			87.1	%	87	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	PFOS-C13 (I)			87.6	%	88	(50-150)		
MRL_CHK	PFOS-C13 (I)			78.6	%	79	(50-150)		
MS_200902230014	PFOS-C13 (I)			72.5	%	73	(50-150)		
MSD_200902230014	PFOS-C13 (I)			68.5	%	69	(50-150)		

QC Ref# 506369 - Nitrosamines by CLLE by EPA 1625MOD **Analysis Date: 02/11/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	N-Nitroso dimethylamine (NDMA)		2.0	2.15	ng/l	108	(70-130)		
LCS2	N-Nitroso dimethylamine (NDMA)		2.0	2.19	ng/L	110	(70-130)	20	1.8
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/l				
MS_200902160003	N-Nitroso dimethylamine (NDMA)	ND	10	9.3	ng/l	93	(70-130)		
MSD_200902160003	N-Nitroso dimethylamine (NDMA)	ND	10	9.82	ng/l	98	(70-130)	20	5.4
LCS1	NDMA-D6 (S)				%	108	(50-150)		
LCS2	NDMA-D6 (S)				%	115	(50-150)		
MBLK	NDMA-D6 (S)				%	106	(50-150)		
MS_200902160003	NDMA-D6 (S)				%	107	(50-150)		
MSD_200902160003	NDMA-D6 (S)				%	96	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

MWH Laboratories - Monrovia, CA
Lab Report 2009-1556
Results Prepared for: Joseph Ureno
Date of Analysis: 2-19-09
February 20, 2009

MP ID	**Sample**	**EDTA**	**NTA**
		mg/L	**mg/L**
1556	200902030014 Project # 303170	< 0.100	< 0.100
1556 Dup	200902030014 Project # 303170 Dup	< 0.100	< 0.100
	Mean	< 0.100	< 0.100
	QC	0.452	0.516
	QC Value	0.465	0.480
	% Recovery	97.204	107.500
	Instrument Detection Limit	0.050	0.050
	Sample Detection Limit	0.100	0.100

Report by:____________________________________

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

02/09/2009

Henry Barrientos
Groundwater Management Unit
Water Supply Management Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Henry Barrientos,

This transmits the analytical results for the Laboratory services that you requested. The data contained herein are supported by the Laboratory Services Unit's Quality Assurance/Quality Control Program.

The analytical results, quality control information, and sample handling observations have been reviewed for both completeness and accuracy, with any exceptions noted.

Laboratory Analyst(s)

James N. Scott
Laboratory Manager

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

Lab No. 200902020044 MW-1

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E08D12**	**Unknown**	**91041015-0000**	**02/02/2009**	**11:55**	**Thomas M.**

Batch: 55392

Prep Date: Analysis Date: 02/04/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.17	mg/L		

Lab No. 200902020045 MW2

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E08D11**	**Unknown**	**91041015-0000**	**02/02/2009**	**10:25**	**Thomas M.**

Batch: 55392

Prep Date: Analysis Date: 02/04/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.10	mg/L		

Lab No. 200902020046 MW-3

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E07A014**	**Unknown**	**91041015-0000**	**02/02/2009**	**8:35**	**Thomas M.**

Batch: 55392

Prep Date: Analysis Date: 02/04/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.16	mg/L		

Lab No. 200902020047 MW-4

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E07A015**	**Unknown**	**91041015-0000**	**02/02/2009**	**9:35**	**Thomas M.**

Batch: 55392

Prep Date: Analysis Date: 02/04/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.15	mg/L		

Lab No. 200902020048

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**L-10 COMP**	**Unknown**	**91041015-0000**	**02/02/2009**	**0:00**	**Thomas M.**

Batch: 55392

Prep Date: Analysis Date: 02/04/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.22	mg/L		

Lab No. 200902020049

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**SOURCE**	**Unknown**	**91041015-0000**	**02/02/2009**	**10:45**	**Thomas M.**

Batch: 55392

Prep Date: Analysis Date: 02/04/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.38	mg/L		

Legend:

DLR = Detection Limit For Reporting
ND = Not Detected At Or Above The DLR
NT = Not Tested
NR = Not Reported

ABS = Centimeters $^{-1}$
Cells/ml = Cells Per Milliliter
CFU/100 ml = Colony Forming Units Per 100 Milliliters
CFU/ml = Colony Forming Units Per Milliliter
cysts/L = Cysts Per Liter
Deg. C = Degrees Centigrade
mg/L = Milligrams Per Liter
MPN/100ml = Most Probable Number Per 100 Milliliters
ng/L = Nanograms Per Liter

NTU = Nephelometric Turbidity Units
oocysts/L = Oocysts Per Liter
P/A 100ml = Presence/Absence Per 100 Milliliters
pCi/L = Picocuries Per Liter
Rhod-Eqiv = Rhodamine Equivalents
T.O.N. = Threshold Odor Number
ug C/L = Micrograms Carbon Per Liter
ug/L = Micrograms Per Liter
umhos= Microhms

Data Qualifier Definitions:

A = Results may be biased high.
B = Results may be biased low.
D = Analyte is present in method blank.

E = Analyte confirmation on secondary column.
G = Sample hold time exceeded.
H = Presence verified but not quantified.
I = Sample unpreserved or improperly preserved.

J = Estimated result; value may not be accurate.
K = Too numerous to count; value represents filtration volume.
L = Matrix interference(s).
M = Field blanks not prepared at customer's request.

Batch: 55392

QC Code	Test Name		Reported Value	Units	Flag		Acceptance Range	RPD	Flag	RPD Limit
LFB	Bromide	Spike Amount: 0.5	0.46	mg/L		%Rec: 91.4	90 - 110			
LFB	Bromide	Spike Amount: 0.5	0.54	mg/L		%Rec: 107.8	90 - 110			
LFB	Bromide	Spike Amount: 0.5	0.51	mg/L		%Rec: 101.6	90 - 110			
LFM	Bromide	Spike Amount: 0.4	0.44	mg/L		%Rec: 90.5	90 - 110			
LFM	Bromide	Spike Amount: 0.4	0.53	mg/L		%Rec: 92.8	90 - 110			
LFM D	Bromide	Spike Amount: 0.4	0.53	mg/L		%Rec: 93	90 - 110	0.2		15
LFM D	Bromide	Spike Amount: 0.4	0.44	mg/L		%Rec: 90.3	90 - 110	0.2		15
QCS R	Bromide	20	20.1	mg/L		%Rec: 100.5	90 - 110			
LFB	Fluoride	Spike Amount: 0.5	0.48	mg/L		%Rec: 95.2	90 - 110			
LFB	Fluoride	Spike Amount: 0.5	0.49	mg/L		%Rec: 97.2	90 - 110			
LFB	Fluoride	Spike Amount: 0.5	0.49	mg/L		%Rec: 97.6	90 - 110			
LFM	Fluoride	Spike Amount: 0.4	.434	mg/L		%Rec: 96	90 - 110			
LFM	Fluoride	Spike Amount: 0.4	0.42	mg/L		%Rec: 93.8	90 - 110			
LFM D	Fluoride	Spike Amount: 0.4	.42	mg/L		%Rec: 92.5	90 - 110	3.3		15
LFM D	Fluoride	Spike Amount: 0.4	0.42	mg/L		%Rec: 94	90 - 110	0.2		15
QCS R	Fluoride	10	10.6	mg/L		%Rec: 106.1	90 - 110			
LFB	Nitrate	Spike Amount: 0.5	0.5	mg/L		%Rec: 106.6	90 - 110			
LFB	Nitrate	Spike Amount: 0.5	0.5	mg/L		%Rec: 102.6	90 - 110			
LFB	Nitrate	Spike Amount: 0.5	0.5	mg/L		%Rec: 98	90 - 110			
LFM	Nitrate	Spike Amount: 0.4	2.0	mg/L		%Rec: 96.5	90 - 110			
LFM	Nitrate	Spike Amount: 0.4	2.5	mg/L		%Rec: 109.5	90 - 110			
LFM D	Nitrate	Spike Amount: 0.4	2.5	mg/L		%Rec: 109.5	90 - 110	0		15
LFM D	Nitrate	Spike Amount: 0.4	2.0	mg/L		%Rec: 95.8	90 - 110	0.1		15
QCS R	Nitrate	20	21.4	mg/L		%Rec: 107.2	90 - 110			
LFB	Phosphate	Spike Amount: 0.5	0.48	mg/L		%Rec: 95	90 - 110			
LFB	Phosphate	Spike Amount: 0.5	0.47	mg/L		%Rec: 93.2	90 - 110			
LFB	Phosphate	Spike Amount: 0.5	0.49	mg/L		%Rec: 98.6	90 - 110			
LFM	Phosphate	Spike Amount: 0.4	0.51	mg/L		%Rec: 95	90 - 110			
LFM	Phosphate	Spike Amount: 0.4	0.95	mg/L		%Rec: 103.8	90 - 110			
LFM D	Phosphate	Spike Amount: 0.4	0.51	mg/L		%Rec: 94.8	90 - 110	0.2		15
LFM D	Phosphate	Spike Amount: 0.4	0.94	mg/L		%Rec: 100.5	90 - 110	1.4		15
QCS R	Phosphate	5	5.04	mg/L		%Rec: 100.7	90 - 110			
LFB	Sulfate	Spike Amount: 40	41.1	mg/L		%Rec: 102.7	90 - 110			
LFB	Sulfate	Spike Amount: 40	42.1	mg/L		%Rec: 105.3	90 - 110			
LFB	Sulfate	Spike Amount: 40	42.2	mg/L		%Rec: 105.6	90 - 110			
LFM	Sulfate	Spike Amount: 20	45.2	mg/L		%Rec: 103.5	90 - 110			
LFM	Sulfate	Spike Amount: 20	52.0	mg/L		%Rec: 100.8	90 - 110			
LFM D	Sulfate	Spike Amount: 20	45.1	mg/L		%Rec: 102.9	90 - 110	0.2		15
LFM D	Sulfate	Spike Amount: 20	51.9	mg/L		%Rec: 100.2	90 - 110	0.2		15
QCS R	Sulfate	30	30.1	mg/L		%Rec: 100.2	90 - 110			

Report Notes:

QCS, spike recovery, and RPD values that are outside of established limits are underlined.

If an LFM recovery exceeds the established limits for any analyte, and the laboratory performance for other QC parameters is shown to be in control for that analyte, then failure is not system related but due to matrix interferences and is labeled as suspect.

Reported values that are flagged "H" are above the established acceptance range; reported values that are flagged "L" are below the acceptance range. RPD results flagged "H" are above the established RPD limit.-

Quality control sample (LFB, LFM, LFM D, QCS, QCS R, and Surrogate) reporting frequency is based on the method requirement (e.g., a QCS may not be run with every batch).

Legend:

LFB = Laboratory Fortified Blank: An aliquot of a Laboratroty Reagent Blank (LRB) to which known quantities of the method analytes are added in the laboratory. The LFB i analyzed exactly like a sample.

LFB D = Laboratory Fortified Blank Duplicate: A duplicate aliquot of an LRB to which known quantities of the method analytes are added in the laboratory. The LFB D is analyzed exactly like a sample.

LFM = Laboratory Fortified Matrix: An aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM is analyze exactly like a sample.

LFM D = Laboratory Fortified Matrix Duplicate: A duplicate aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory The LFM D is analyzed exactly like a sample.

QCS = Quality Control Sample: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS is obtained fron a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified concentration range.

QCS R = Quality Control Sample Recovery: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS R i obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified recovery range.

RPD = Relative Percent Difference

SUR = Surrogate. An organic compound that is similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis.

Curtis & Tompkins, Ltd.

Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 210377
ANALYTICAL REPORT

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

Project : 27011-07-4200
Location : Recycled Water Study
Level : II

Sample ID	Lab ID
L-5 COMP	210377-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Anna Pagantto
Project Manager

Date: 03/30/2009

Signature:
Senior Program Manager

Date: 03/30/2009

NELAP # 01107CA

CASE NARRATIVE

Laboratory number:	**210377**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**03/02/09**
Samples Received:	**03/02/09**

This data package contains sample and QC results for one water sample, requested for the above referenced project on 03/02/09. The sample was received cold and intact.

Total Phosphorous (SM4500P-E):
No analytical problems were encountered.

EPA 552 (EPA 552):
Weck Laboratories, Inc. in Hacienda Heights, CA performed the analysis. Please see the Weck Laboratories, Inc. case narrative.

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14437

PROJECT NAME SCVWD Recycled Water
PROJECT NUMBER 27011-07-4200
RECORDER T. Murphy (SIGN)
SAMPLERS T. MURPHY (PRINT)
T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500ml
D. Plastic Liter
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 210377

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	ANALYSIS REQUESTED: HAAs	Total Phosphate							TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3/2/09	COMP	L-5 COMP	–	–	–	B	A	1					X								1						
2		COMP	L-5 COMP	–	–	–	C	A				1			X							1						
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	NO		3/2/09	1515		3/2/09	1555

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ____________ TEL ________ FAX ________

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

3 of 11

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 210377 Date Received 3/2/09 Number of coolers 1
Client Locus Project SCVWD Recycled water

Date Opened 3/2/09 By (print) Dhuong (sign)
Date Logged in 3/3/09 By (print) S. Evans (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES [✓ NO]
Shipping info

2A. Were custody seals present? ... ☑ YES (circle) [✓ on cooler] on samples ☐ NO
How many 1 Name T. murphy Date 3/2/09
2B. Were custody seals intact upon arrival? [✓ YES] NO N/A
3. Were custody papers dry and intact when received? [✓ YES] NO
4. Were custody papers filled out properly (ink, signed, etc)? [✓ YES] NO
5. Is the project identifiable from custody papers? (If so fill out top of form) [✓ YES] NO
6. Indicate the packing in cooler: (if other, describe)

☑ Bubble Wrap
☐ Cloth material
☐ Foam blocks
☐ Cardboard
☐ Bags
☐ Styrofoam
☐ None
☐ Paper towels

7. Temperature documentation:

Type of ice used: ☑ Wet ☐ Blue/Gel ☐ None Temp(°C)

☑ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES [✓ NO]
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? [✓ YES] NO
10. Are samples in the appropriate containers for indicated tests? [✓ YES] NO
11. Are sample labels present, in good condition and complete? [✓ YES] NO
12. Do the sample labels agree with custody papers? [✓ YES] NO
13. Was sufficient amount of sample sent for tests requested? [✓ YES] NO
14. Are the samples appropriately preserved? [✓ YES] NO N/A
15. Are bubbles > 6mm absent in VOA samples? YES NO [✓ N/A]
16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

Total Phosphorous

Lab #:	210377	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Batch#:	148460
Field ID:	L-5 COMP	Sampled:	03/02/09
Matrix:	Water	Received:	03/02/09
Units:	mg/L	Analyzed:	03/03/09
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	210377-001	0.047	0.030
BLANK	QC485626	ND	0.030

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Phosphorous

Lab #:	210377	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Batch#:	148460
Field ID:	ZZZZZZZZZZ	Sampled:	02/25/09
MSS Lab ID:	210290-006	Received:	02/25/09
Matrix:	Water	Analyzed:	03/03/09
Units:	mg/L		

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**	**Diln Fac**
LCS	QC485627		0.3960	0.4062	103	80-123			1.000
MS	QC485628	0.05840	0.3960	0.4348	95	18-179			1.667
MSD	QC485629		0.3960	0.4286	93	18-179	1	35	1.667

RPD= Relative Percent Difference

Laboratory Job Number 210377

Subcontracted Products

Weck Laboratories, Inc.

Certificate of Analysis

Report Date: Friday, March 27, 2009
Received Date: Wednesday, March 4, 2009
Received Time: 8:10 am
Turnaround Time: Normal

Client: Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Attn: Anna M. Pajarillo
Project: 210377

Phones: (800) 522-1878
Fax: (510) 486-0532

P.O. #:

Lab Sample ID: 9C04030-01 **Sample ID: L-5 Comp** **Matrix:** Water
Sampled by: Client **Sampled: 03/02/09 00:00**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	3/16/09	3/26/09 5:27 cwn	W9C0458	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	3/16/09	3/26/09 5:27 cwn	W9C0458	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	3/16/09	3/26/09 5:27 cwn	W9C0458	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	3/16/09	3/26/09 5:27 cwn	W9C0458	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	3/16/09	3/26/09 5:27 cwn	W9C0458	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	3/16/09	3/26/09 5:27 cwn	W9C0458	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	3/16/09	3/26/09 5:27 cwn	W9C0458	
Surrogate: 2,3-Dibromopropionic acid	*91 %*		*70-130*							

Certificate of Analysis

Quality Control Section

HAAs by EPA 552.2 - Quality Control

Batch W9C0458 - EPA 552.2

Blank (W9C0458-BLK1) **Prepared: 03/16/09 Analyzed: 03/26/09 00:59**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*8.98*		ug/l	*10.0*	*90*	*70-130*		
Monochloroacetic acid (mcaa)		ND		ug/l					
Monobromoacetic acid (mbaa)		ND		ug/l					
Dichloroacetic acid (dcaa)		ND		ug/l					
Trichloroacetic acid (tcaa)		ND		ug/l					
Bromochloroacetic acid (bcaa)		ND		ug/l					
Dibromoacetic acid (dbaa)		ND		ug/l					
HAA5, Total		ND		ug/l					

LCS (W9C0458-BS1) **Prepared: 03/16/09 Analyzed: 03/26/09 01:23**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*10.2*		ug/l	*10.0*	*102*	*70-130*		
Monochloroacetic acid (mcaa)		10.2		ug/l	10.0	102	70-130		
Monobromoacetic acid (mbaa)		10.5		ug/l	10.0	105	70-130		
Dichloroacetic acid (dcaa)		13.0		ug/l	10.0	130	70-130		
Trichloroacetic acid (tcaa)		11.7		ug/l	10.0	117	70-130		
Bromochloroacetic acid (bcaa)		11.2		ug/l	10.0	112	70-130		
Dibromoacetic acid (dbaa)		11.4		ug/l	10.0	114	70-130		

Matrix Spike (W9C0458-MS1) **Source: 9C04001-01** **Prepared: 03/16/09 Analyzed: 03/26/09 01:47**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.23*		ug/l	*10.0*	*92*	*70-130*		
Monochloroacetic acid (mcaa)	0.592	10.2		ug/l	10.0	96	70-130		
Monobromoacetic acid (mbaa)	ND	10.6		ug/l	10.0	106	70-130		
Dichloroacetic acid (dcaa)	12.3	22.9		ug/l	10.0	105	70-130		
Trichloroacetic acid (tcaa)	11.2	21.2		ug/l	10.0	99	70-130		
Bromochloroacetic acid (bcaa)	0.796	11.2		ug/l	10.0	104	70-130		
Dibromoacetic acid (dbaa)	0.148	10.9		ug/l	10.0	108	70-130		

Matrix Spike (W9C0458-MS2) **Source: 9C04001-02** **Prepared: 03/16/09 Analyzed: 03/26/09 02:36**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.59*		ug/l	*10.0*	*96*	*70-130*		
Monochloroacetic acid (mcaa)	0.393	10.4		ug/l	10.0	100	70-130		
Monobromoacetic acid (mbaa)	ND	10.6		ug/l	10.0	106	70-130		
Dichloroacetic acid (dcaa)	12.0	21.8		ug/l	10.0	99	70-130		
Trichloroacetic acid (tcaa)	12.0	22.3		ug/l	10.0	103	70-130		
Bromochloroacetic acid (bcaa)	0.648	11.0		ug/l	10.0	103	70-130		
Dibromoacetic acid (dbaa)	ND	10.8		ug/l	10.0	108	70-130		

Matrix Spike Dup (W9C0458-MSD1) **Source: 9C04001-01** **Prepared: 03/16/09 Analyzed: 03/26/09 02:12**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit

Certificate of Analysis

HAAs by EPA 552.2 - Quality Control

Batch W9C0458 - EPA 552.2

Matrix Spike Dup (W9C0458-MSD1) **Source: 9C04001-01** **Prepared: 03/16/09** **Analyzed: 03/26/09 02:12**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.15*		ug/l	*10.0*	*92*	*70-130*		
Monochloroacetic acid (mcaa)	0.592	10.5		ug/l	10.0	99	70-130	3	30
Monobromoacetic acid (mbaa)	ND	10.8		ug/l	10.0	108	70-130	2	30
Dichloroacetic acid (dcaa)	12.3	23.2		ug/l	10.0	109	70-130	1	30
Trichloroacetic acid (tcaa)	11.2	20.9		ug/l	10.0	96	70-130	1	30
Bromochloroacetic acid (bcaa)	0.796	11.2		ug/l	10.0	104	70-130	0.2	30
Dibromoacetic acid (dbaa)	0.148	10.9		ug/l	10.0	107	70-130	0.3	30

Matrix Spike Dup (W9C0458-MSD2) **Source: 9C04001-02** **Prepared: 03/16/09** **Analyzed: 03/26/09 03:01**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.99*		ug/l	*10.0*	*100*	*70-130*		
Monochloroacetic acid (mcaa)	0.393	10.3		ug/l	10.0	99	70-130	0.2	30
Monobromoacetic acid (mbaa)	ND	10.7		ug/l	10.0	107	70-130	1	30
Dichloroacetic acid (dcaa)	12.0	22.3		ug/l	10.0	104	70-130	2	30
Trichloroacetic acid (tcaa)	12.0	22.9		ug/l	10.0	109	70-130	3	30
Bromochloroacetic acid (bcaa)	0.648	11.5		ug/l	10.0	109	70-130	5	30
Dibromoacetic acid (dbaa)	ND	11.6		ug/l	10.0	116	70-130	6	30

Certificate of Analysis

Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Kim Tu

Authorized Signature

Contact: Kim G Tu (Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
Dil	Dilution Factor
MDL	Method Detection Limit
MDA	Minimum Detectable Activity

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
03/20/2009
MWH LABORATORIES

RCZ: Richard.C.Zimmer

Project Manager

ACCREDITED IN ACCORDANCE WITH nelac
01114CA

Report#: 303834
Project:
RECYCLED-WATER-STUDY
Group: Chemistry

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
PO #: 27011-07-7000
Group #: 303834
Project #: RECYCLED-WATER-STUDY
Project Manager: Richard.C.Zimmer
Phone: 626-386-1157

The following samples were received from you on **March 03, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Matrix	Sample Date
200903030014	L-5 Composite	Water	02-Mar-2009 0000
	@NDMA_SPE		

Test Description
@NDMA_SPE -- Nitrosamines by GCMS

2/7

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

303834 SERIAL NO. 14436

PROJECT NAME SCVWD Recycled Water

PROJECT NUMBER 27011-07-7000

RECORDER T. Murphy (SIGN)

SAMPLERS T. MURPHY (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- A. 40-ml VOA Vial
- [✓ B.] Glass Liter
- C. Plastic 500-ml
- D. Plastic Liter
- E. Brass Tube
- F. Other

SAMPLE DESCRIPTION CODES
- [✓ A.] Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other

TAT CODES
- [✓ 1.] Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other

ANALYTICAL LAB MWH

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO$_3$	HCL	Thio	Field Filtered (check)	ANALYSIS REQUESTED: NDMA	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3/2/09	COMP	L-5 COMP	—	—	—	B					1		X	1						
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9	3/7																				
10																					
11																					
12																					
13																					
14																					
15																					
16																					

NOTES / MISCELLANEOUS

2.0° ON ICE

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Commercial Courier	Cooler	ND	Thomas Murphy	3/2/09			3-3-9	856

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ OTHER ______ TEL ______ FAX ______

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MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 303834

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
03/03/2009

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	200903030014	**L-5 Composite**				

SUMMARY OF POSITIVE DATA ONLY

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 303834

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
03/03/2009

L-5 Composite (200903030014) **Sampled on 03/02/2009 0000**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
3/4/2009	03/10/2009 13:14	507144	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
3/4/2009	03/10/2009 13:14	507144	(EPA 521)	NDMA-D6	76	%		1

Rounding on totals after summation.
(c) - indicates calculated results

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Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Summary: 303834

Locus Technologies

QC Ref # 507144 - Nitrosamines by GCMS **Analysis Date: 03/10/2009**

200903030014 L-5 Composite Analyzed by: KAM

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Report: 303834

Locus Technologies

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 507144 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 03/10/2009**			
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	1.26	ng/l	63	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	32.2	ng/l	80	(70-130)		
CCCL	NDMA-D6 (S)				%	87	(70-130)		
CCCM	NDMA-D6 (S)				%	86	(70-130)		
QC Ref# 507191 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 03/07/2009**			
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	1.92	ng/l	96	(50-150)		
MS1_200903120010	N-Nitroso dimethylamine (NDMA)	ND	2.0	2.03	ng/l	102	(70-130)		
MSD1_200903120010	N-Nitroso dimethylamine (NDMA)	ND	2.0	1.73	ng/l	87	(70-130)	20	16
MRL_CHK	NDMA-D6 (S)				%	76	(70-130)		
MS1_200903120010	NDMA-D6 (S)				%	75	(70-130)		
MSD1_200903120010	NDMA-D6 (S)				%	**63**	(70-130)		
QC Ref# 507192 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 03/09/2009**			
LCS1	N-Nitroso dimethylamine (NDMA)		40	34.6	ng/l	87	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/l				
LCS1	NDMA-D6 (S)				%	75	(70-130)		
MBLK	NDMA-D6 (S)				%	72	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Sample Event 4
4/28/2009

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 211757
ANALYTICAL REPORT

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

Project : 27011-07-4200
Location : Recycled Water Study
Level : II

Sample ID	Lab ID
MW-1	211757-001
MW-2	211757-002
MW-3	211757-003
MW-4	211757-004
L5 COMP	211757-005
L10 COMP	211757-006
SOURCE	211757-007

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Anna Pagantto
Project Manager
Date: 05/12/2009

Signature:
Senior Program Manager
Date: 05/12/2009

NELAP # 01107CA

CASE NARRATIVE

Laboratory number:	**211757**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**04/28/09**
Samples Received:	**04/28/09**

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 04/28/09. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

Metals (EPA 6010B):
High recoveries were observed for magnesium in the MS/MSD for batch 150455; the parent sample was not a project sample, and the associated RPD was within limits. No other analytical problems were encountered.

Ion Chromatography (EPA 300.0):
No analytical problems were encountered.

Total Cyanide (SM4500CN-E):
No analytical problems were encountered.

Alkalinity (SM2320B):
No analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):
No analytical problems were encountered.

Total Phosphorous (SM4500P-E):
No analytical problems were encountered.

Total Organic Carbon (TOC) (SM5310C):
No analytical problems were encountered.

Dissolved Organic Carbon (DOC) (SM5310C):
No analytical problems were encountered.

Surfactants (MBAS) (SM5540C):
No analytical problems were encountered.

EPA 552 (EPA 552):
Weck Laboratories, Inc. in Hacienda Heights, CA performed the analysis. Please see the Weck Laboratories, Inc. case narrative.

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14453

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLERS Castro / Murphy (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 PoM
F. Other 500ml Glass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 21757

					AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED											LABORATORY USE ONLY		
	NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6 full list	Total Phosphate	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1	4-28-09	900	MW-1	18.5	915	6.48	D	A	1					X							1		✓				
	2							C	A		1					X						1		✓				
	3							F	A				1				X					1		✓				
	4							E	A	1								X				1		✓				
	5							A	A			3							X			1		✓	✓			
	6							B	A	1										X		1		✓				
	7							E	A				1								X	1		✓				
2	8		1010	MW-2	15.9	744	6.71	D	A	1					X							1		✓				
	9							C	A		1					X						1		✓				
	10							F	A				1				X					1		✓				
	11							E	A	1								X				1		✓				
	12							A	A			3							X			1		✓	✓			
	13							B	A	1										X		1		✓				
	14							E	A				1								X	1		✓				
	15																											
	16																											

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride,

2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-54, 55, 56	Thomas Murphy	4/28/09	1426		4/28/09	1426

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ________________ TEL ________ FAX ________

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14454

PROJECT NAME Recycled Water Study
SAMPLERS Castro / Murphy (PRINT)
PROJECT NUMBER 27011-07-4200
(SIGN)
RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- [✓ A.] 40-ml VOA Vial
- [✓ B.] Glass Liter
- [✓ C.] Plastic 500-ml
- [✓ D.] Plastic Liter
- [✓ E.] ~~Brass Tube~~ 250 Poly
- [✓ F.] Other 500ml Glass

SAMPLE DESCRIPTION CODES
- [✓ A.] Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other ________

TAT CODES
- [✓ 1.] Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 211757

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See Note 1	See Note 2	TOC/DOC	TDS	8010/8020	HAA6	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
5	1	4-28-09	1220	MW-5	14.7	898	6.65	D	A	1					X									1		✓				
	2							C	A		1					X								1		✓				
	3							F	A				1				X							1		✓				
	4							E	A	1								X						1		✓				
	5							A	A			3							X					1		✓	✓			
	6							B	A	1										X				1		✓				
	7							E	A				1								X			1		✓				
4	8		1120	MW-4	18.3	922	6.68	D	A	1					X									1		✓				
	9							C	A		1					X								1		✓				
	10							E	A				1				X							1		✓				
	11							E	A	1								X						1		✓				
	12							A	A			3							X					1		✓	✓			
	13							B	A	1										X				1		✓				
	14							E	A				1								X			1		✓				
	15																									✓				
	16																									✓				

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride,
2. Boron, Calcium, Magnesium, Sodium, Potassium

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-53, 55, 56	Thomas Murphy	4/28/09	1426		4/28/09	1426

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______________________________ TEL __________ FAX __________

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14455

PROJECT NAME Recycled Water Study
SAMPLERS Castro / Murphy (PRINT)
(SIGN)
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
(A). 40-ml VOA Vial
(B). ~~Glass Liter~~
(C). Plastic 500-ml
(D). ~~Plastic Liter~~ Amber 500 glass
E. ~~Brass Tube~~ 250 Amber glass
F. Other 250 Poly

SAMPLE DESCRIPTION CODES
(A). Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
(1). Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 21757

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED												LABORATORY USE ONLY		
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO₃	HCL	H2SO4	Field Filtered (check)	See note 1	See note 2	TOC	DOC	TDS	8010/8020	HAA6	Total Phosphate	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	4-28-09	COMP	L5 COMP	13.8	2427	6.93	C	A	1					X								1		✓				
2	↓	↓	↓	↓	↓	↓	F	A		1					X							1		✓				
3	↓	↓	↓	↓	↓	↓	E	A				1				X						1		✓				
4	↓	↓	↓	↓	↓	↓	D	A				1					X					1		✓				
5	↓	↓	↓	↓	↓	↓	F	A	1									X				1		✓				
6	↓	↓	↓	↓	↓	↓	A	A			2								X			1		✓	✓			
7	↓	↓	↓	↓	↓	↓	E	A	1											X		1		✓				
8	↓	↓	↓	↓	↓	↓	F	A				1									X	1		✓				
9	↓	↓	L10 COMP	14.0	1554	7.21	C	A	1					X								1		✓				
10	↓	↓	↓	↓	↓	↓	F	A		1					X							1		✓				
11	↓	↓	↓	↓	↓	↓	E	A				1				X						1		✓				
12	↓	↓	↓	↓	↓	↓	D	A				1					X					1		✓				
13	↓	↓	↓	↓	↓	↓	F	A	1									X				1		✓				
14	↓	↓	↓	↓	↓	↓	A	A			2								X			1		✓	✓			
15	↓	↓	↓	↓	↓	↓	E	A	1											X		1		✓				
16	↓	↓	↓	↓	↓	↓	F	A				1									X	1		✓				

5 (beside row 1)
4 (beside row 9)

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp. 4.2

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-53,54,56	Thomas Murphy	4/28/09	1426		4/28/09	1426

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below)

Verbals Requested: Yes ☑ No ☐

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☐ OTHER ______ TEL ______ FAX ______

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5 of 68

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14456

PROJECT NAME Recycled Water Study

SAMPLERS Castro / Murphy (PRINT)

(SIGN)

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
(A) 40-ml VOA Vial
(B) Glass Liter
(C) Plastic 500-ml
(D) Plastic Liter
(E) ~~Brass Tube~~ 250 poly
(F) Other 250 glass

SAMPLE DESCRIPTION CODES
(A) Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
(H) Blank/Spike
I. Other ________

TAT CODES
(1) Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 21757

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)
7 1	4-28-09	1010	Source	18.0	1209	6.80	D	A
2	↓	↓	↓	↓	↓	↓	C	A
3	↓	↓	↓	↓	↓	↓	F	A
4	↓	↓	↓	↓	↓	↓	E	A
5	↓	↓	↓	↓	↓	↓	A	A
6	↓	↓	↓	↓	↓	↓	B	A
7	↓	↓	↓	↓	↓	↓	E	A
8	↓	↓	↓	↓	↓	↓	D	A
9	↓	↓	↓	↓	↓	↓	C	A
10	↓	—	Temp Blank	—	—	—	A	H
11								
12								
13								
14								
15								
16								

NO.	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO3	HCL	H2SO4	~~Field Filtered (check)~~ NaOH	ANALYSIS REQUESTED: See note 1	See note 2	TOC/DOC	TDS	8010/8020	HAA6	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1					X									1		✓				
2		1					X								1		✓				
3				1				X							1		✓				
4	1								X						1		✓				
5			3							X					1		✓				
6	1										X				1		✓				
7				1								X			1		✓				
8	1												X		1		✓				
9					1									X	1		✓				
10	1															*	✓	NA	*		
11																					
12																					
13																					
14																					
15																					
16																					

NOTES / MISCELLANEOUS
1. Alkalinty, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.

Field / Container Temp. 4°C

* Temp. to be measured & rec. upon reciept of samples at lab 2.5 °C 4/28/09 1800 hr

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-53, 54, 55	Thomas Murphy	4/28/09	1426		4/28/09	1426

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ OTHER ______________________ TEL __________ FAX __________

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd

Login # 211757 Date Received 4/28/09 Number of coolers 3
Client LOCUS Project RECYCLED WATER STUDY

Date Opened 4/28/09 By (print) M.VILLANUEVA (sign)
Date Logged in ↓ By (print) ↓ (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES [✓ NO]
Shipping info

2A. Were custody seals present? ☒ YES (circle) [✓ on cooler] on samples ☐ NO
How many 3 Name TOM MURPHY Date 4/28/09

2B. Were custody seals intact upon arrival? [✓ YES] NO N/A

3. Were custody papers dry and intact when received? [✓ YES] NO

4. Were custody papers filled out properly (ink, signed, etc)? [✓ YES] NO

5. Is the project identifiable from custody papers? (If so fill out top of form) [✓ YES] NO

6. Indicate the packing in cooler: (if other, describe)

☐ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 2.5 4/28/09 1800 M
ONLY 1 COOLER W/TEMP BLANK

☐ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES [✓ NO]
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? [✓ YES] NO

10. Are samples in the appropriate containers for indicated tests? YES [✓ NO]

11. Are sample labels present, in good condition and complete? [✓ YES] NO

12. Do the sample labels agree with custody papers? [✓ YES] NO

13. Was sufficient amount of sample sent for tests requested? [✓ YES] NO

14. Are the samples appropriately preserved? [✓ YES] NO N/A

15. Are bubbles > 6mm absent in VOA samples? [✓ YES] NO N/A

16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS
SAMPLE# 5 & 6 HAA6 CONTAINER REC'D IN 250ML POLY, LIMITED SAMPLES

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1

Rev. 6 Number 1 of 3
Effective: 23 July 2008
Z:\qc\forms\checklists\Cooler Receipt Checklist_rv6.doc

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	150668
Lab ID:	211757-001	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/05/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	82	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	150712
Lab ID:	211757-002	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	95	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	150712
Lab ID:	211757-003	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	105	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	150712
Lab ID:	211757-004	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L5 COMP	Batch#:	150712
Lab ID:	211757-005	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	106	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L10 COMP	Batch#:	150712
Lab ID:	211757-006	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	150712
Lab ID:	211757-007	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	13	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	10	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	3.9	0.5
Chlorobenzene	ND	0.5
Bromoform	0.6	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC494635	Batch#:	150668
Matrix:	Water	Analyzed:	05/05/09
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	84	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC494809	Batch#:	150712
Matrix:	Water	Analyzed:	05/06/09
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	90	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	150668
Units:	ug/L	Analyzed:	05/05/09
Diln Fac:	1.000		

Type: BS   Lab ID: QC494633

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	25.75	103	80-120
Trichloroethene	25.00	27.40	110	80-120
Chlorobenzene	25.00	26.46	106	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-120

Type: BSD   Lab ID: QC494634

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	27.27	109	80-120	6	35
Trichloroethene	25.00	28.56	114	80-120	4	35
Chlorobenzene	25.00	27.21	109	80-120	3	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	150712
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Type: BS　　Lab ID: QC494807

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	15.00	15.77	105	80-120
Trichloroethene	15.00	16.09	107	80-120
Chlorobenzene	15.00	15.25	102	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	94	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	95	80-120

Type: BSD　　Lab ID: QC494808

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	15.00	15.74	105	80-120	0	35
Trichloroethene	15.00	15.44	103	80-120	4	35
Chlorobenzene	15.00	15.77	105	80-120	3	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	87	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	96	80-120

RPD= Relative Percent Difference

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	150668
Lab ID:	211757-001	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/05/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	109	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	82	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	150712
Lab ID:	211757-002	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	95	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	99	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	150712
Lab ID:	211757-003	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	80-120
Toluene-d8	104	80-120
Bromofluorobenzene	105	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	150712
Lab ID:	211757-004	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	97	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L5 COMP	Batch#:	150712
Lab ID:	211757-005	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	106	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L10 COMP	Batch#:	150712
Lab ID:	211757-006	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	150712
Lab ID:	211757-007	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	96	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-125

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC494635	Batch#:	150668
Matrix:	Water	Analyzed:	05/05/09
Units:	ug/L		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	107	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	84	80-125

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC494809	Batch#:	150712
Matrix:	Water	Analyzed:	05/06/09
Units:	ug/L		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	90	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	102	80-125

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	150668
Units:	ug/L	Analyzed:	05/05/09
Diln Fac:	1.000		

Type: BS
Lab ID: QC494633

Analyte	Spiked	Result	%REC	Limits
Benzene	25.00	28.31	113	80-120
Toluene	25.00	28.38	114	80-120
Chlorobenzene	25.00	26.46	106	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-125

Type: BSD
Lab ID: QC494634

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	25.00	28.80	115	80-120	2	35
Toluene	25.00	28.61	114	80-120	1	35
Chlorobenzene	25.00	27.21	109	80-120	3	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	102	80-125

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	150712
Units:	ug/L	Analyzed:	05/06/09
Diln Fac:	1.000		

Type: BS

Lab ID: QC494807

Analyte	Spiked	Result	%REC	Limits
Benzene	15.00	15.53	104	80-120
Toluene	15.00	16.17	108	80-120
Chlorobenzene	15.00	15.25	102	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	94	80-120
Toluene-d8	103	80-120
Bromofluorobenzene	95	80-125

Type: BSD

Lab ID: QC494808

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	15.00	14.94	100	80-120	4	35
Toluene	15.00	15.93	106	80-120	2	35
Chlorobenzene	15.00	15.77	105	80-120	3	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	87	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	96	80-125

RPD= Relative Percent Difference

Boron

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Sampled:	04/28/09
Units:	ug/L	Received:	04/28/09
Diln Fac:	1.000	Prepared:	04/29/09
Batch#:	150455	Analyzed:	04/30/09

Field ID	Type	Lab ID	Matrix	Result	RL
MW-1	SAMPLE	211757-001	Water	200	100
MW-2	SAMPLE	211757-002	Water	180	100
MW-3	SAMPLE	211757-003	Water	240	100
MW-4	SAMPLE	211757-004	Water	240	100
L5 COMP	SAMPLE	211757-005	Water	400	100
L10 COMP	SAMPLE	211757-006	Water	290	100
SOURCE	SAMPLE	211757-007	Water	480	100
	BLANK	QC493778	Filtrate	ND	100

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Boron

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Batch#:	150455
Field ID:	ZZZZZZZZZZ	Sampled:	04/28/09
MSS Lab ID:	211756-002	Received:	04/28/09
Matrix:	Filtrate	Prepared:	04/29/09
Units:	ug/L	Analyzed:	04/30/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC493779		1,000	1,059	106	80-120		
BSD	QC493780		1,000	1,081	108	80-120	2	20
MS	QC493781	648.1	1,000	1,823	117	75-124		
MSD	QC493782		1,000	1,860	121	75-124	2	20

RPD= Relative Percent Difference

Calcium

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Received:	04/28/09
Units:	ug/L	Prepared:	04/29/09
Batch#:	150455	Analyzed:	04/30/09
Sampled:	04/28/09		

Field ID	Type	Lab ID	Matrix	Result	RL	Diln Fac
MW-1	SAMPLE	211757-001	Water	90,000	500	1.000
MW-2	SAMPLE	211757-002	Water	70,000	500	1.000
MW-3	SAMPLE	211757-003	Water	120,000	6,700	20.00
MW-4	SAMPLE	211757-004	Water	110,000	6,700	20.00
L5 COMP	SAMPLE	211757-005	Water	210,000	6,700	20.00
L10 COMP	SAMPLE	211757-006	Water	150,000	6,700	20.00
SOURCE	SAMPLE	211757-007	Water	60,000	500	1.000
	BLANK	QC493778	Filtrate	ND	500	1.000

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Calcium

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Batch#:	150455
Field ID:	ZZZZZZZZZZ	Sampled:	04/28/09
MSS Lab ID:	211756-002	Received:	04/28/09
Matrix:	Filtrate	Prepared:	04/29/09
Units:	ug/L	Analyzed:	04/30/09

Type	Lab ID	MSS Result	Spiked	Result	%REC		Limits	RPD	Lim	Diln Fac
BS	QC493779		20,000	20,570	103		80-120			1.000
BSD	QC493780		20,000	21,170	106		80-120	3	20	1.000
MS	QC493781	167,100	20,000	191,300	121	NM	55-136			20.00
MSD	QC493782		20,000	203,800	184	NM	55-136	6	20	20.00

NM= Not Meaningful: Sample concentration > 4X spike concentration
RPD= Relative Percent Difference

Potassium

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Sampled:	04/28/09
Units:	ug/L	Received:	04/28/09
Diln Fac:	1.000	Prepared:	04/29/09
Batch#:	150455	Analyzed:	04/30/09

Field ID	Type	Lab ID	Matrix	Result	RL
MW-1	SAMPLE	211757-001	Water	980	500
MW-2	SAMPLE	211757-002	Water	910	500
MW-3	SAMPLE	211757-003	Water	550	500
MW-4	SAMPLE	211757-004	Water	ND	500
L5 COMP	SAMPLE	211757-005	Water	7,500	500
L10 COMP	SAMPLE	211757-006	Water	1,500	500
SOURCE	SAMPLE	211757-007	Water	15,000	500
	BLANK	QC493778	Filtrate	ND	500

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Potassium

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Batch#:	150455
Field ID:	ZZZZZZZZZZ	Sampled:	04/28/09
MSS Lab ID:	211756-002	Received:	04/28/09
Matrix:	Filtrate	Prepared:	04/29/09
Units:	ug/L	Analyzed:	04/30/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC493779		10,000	9,837	98	75-120		
BSD	QC493780		10,000	10,210	102	75-120	4	20
MS	QC493781	1,872	10,000	13,180	113	63-129		
MSD	QC493782		10,000	13,170	113	63-129	0	22

RPD= Relative Percent Difference

Magnesium

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Received:	04/28/09
Units:	ug/L	Prepared:	04/29/09
Batch#:	150455	Analyzed:	04/30/09
Sampled:	04/28/09		

Field ID	Type	Lab ID	Matrix	Result	RL	Diln Fac
MW-1	SAMPLE	211757-001	Water	58,000	500	1.000
MW-2	SAMPLE	211757-002	Water	44,000	500	1.000
MW-3	SAMPLE	211757-003	Water	73,000	500	1.000
MW-4	SAMPLE	211757-004	Water	65,000	500	1.000
L5 COMP	SAMPLE	211757-005	Water	99,000	500	1.000
L10 COMP	SAMPLE	211757-006	Water	120,000	6,600	20.00
SOURCE	SAMPLE	211757-007	Water	35,000	500	1.000
	BLANK	QC493778	Filtrate	ND	500	1.000

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Magnesium

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Batch#:	150455
Field ID:	ZZZZZZZZZZ	Sampled:	04/28/09
MSS Lab ID:	211756-002	Received:	04/28/09
Matrix:	Filtrate	Prepared:	04/29/09
Units:	ug/L	Analyzed:	04/30/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC493779		20,000	21,000	105	80-120		
BSD	QC493780		20,000	21,770	109	80-120	4	20
MS	QC493781	67,930	20,000	94,310	132 *	60-130		
MSD	QC493782		20,000	94,500	133 *	60-130	0	20

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Sodium

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Received:	04/28/09
Units:	ug/L	Prepared:	04/29/09
Batch#:	150455	Analyzed:	04/30/09
Sampled:	04/28/09		

Field ID	Type	Lab ID	Matrix	Result	RL	Diln Fac
MW-1	SAMPLE	211757-001	Water	44,000	500	1.000
MW-2	SAMPLE	211757-002	Water	37,000	500	1.000
MW-3	SAMPLE	211757-003	Water	47,000	500	1.000
MW-4	SAMPLE	211757-004	Water	44,000	500	1.000
L5 COMP	SAMPLE	211757-005	Water	290,000	10,000	20.00
L10 COMP	SAMPLE	211757-006	Water	75,000	500	1.000
SOURCE	SAMPLE	211757-007	Water	130,000	10,000	20.00
	BLANK	QC493778	Filtrate	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Sodium

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Batch#:	150455
Field ID:	ZZZZZZZZZZ	Sampled:	04/28/09
MSS Lab ID:	211756-002	Received:	04/28/09
Matrix:	Filtrate	Prepared:	04/29/09
Units:	ug/L	Analyzed:	04/30/09

Type	Lab ID	MSS Result	Spiked	Result	%REC		Limits	RPD	Lim	Diln Fac
BS	QC493779		20,000	20,190	101		77-120			1.000
BSD	QC493780		20,000	20,670	103		77-120	2	20	1.000
MS	QC493781	115,400	20,000	137,900	113	NM	52-141			20.00
MSD	QC493782		20,000	146,200	154	NM	52-141	6	20	20.00

NM= Not Meaningful: Sample concentration > 4X spike concentration

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Analytical Report

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Received:	04/28/09
Units:	mg/L		

Field ID:	MW-1	Batch#:	150426
Type:	SAMPLE	Sampled:	04/28/09 09:00
Lab ID:	211757-001		

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	60	1.0	5.000	04/29/09 12:34
Nitrogen, Nitrite	ND	0.05	1.000	04/29/09 02:39
Nitrogen, Nitrate	4.0	0.05	1.000	04/29/09 02:39
Sulfate	80	2.5	5.000	04/29/09 12:34

Field ID:	MW-2	Batch#:	150426
Type:	SAMPLE	Sampled:	04/28/09 10:10
Lab ID:	211757-002		

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	36	1.0	5.000	04/29/09 12:52
Nitrogen, Nitrite	ND	0.05	1.000	04/29/09 03:14
Nitrogen, Nitrate	3.2	0.05	1.000	04/29/09 03:14
Sulfate	46	0.50	1.000	04/29/09 03:14

Field ID:	MW-3	Batch#:	150426
Type:	SAMPLE	Sampled:	04/28/09 12:20
Lab ID:	211757-003		

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	71	1.0	5.000	04/29/09 13:09
Nitrogen, Nitrite	ND	0.05	1.000	04/29/09 03:49
Nitrogen, Nitrate	8.2	0.25	5.000	04/29/09 13:09
Sulfate	76	2.5	5.000	04/29/09 13:09

Field ID:	MW-4	Batch#:	150426
Type:	SAMPLE	Sampled:	04/28/09 11:20
Lab ID:	211757-004		

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	57	1.0	5.000	04/29/09 13:27
Nitrogen, Nitrite	ND	0.05	1.000	04/29/09 04:23
Nitrogen, Nitrate	3.1	0.05	1.000	04/29/09 04:23
Sulfate	71	2.5	5.000	04/29/09 13:27

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Received:	04/28/09
Units:	mg/L		

Field ID:	L5 COMP	Batch#:	150426
Type:	SAMPLE	Sampled:	04/28/09
Lab ID:	211757-005		

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	130	5.0	25.00	04/28/09 19:06
Nitrogen, Nitrite	ND	0.10	2.000	04/29/09 06:25
Nitrogen, Nitrate	2.3	0.10	2.000	04/29/09 06:25
Sulfate	740	13	25.00	04/28/09 19:06

Field ID:	L10 COMP	Batch#:	150426
Type:	SAMPLE	Sampled:	04/28/09
Lab ID:	211757-006		

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	81	2.0	10.00	04/29/09 13:44
Nitrogen, Nitrite	ND	0.05	1.000	04/29/09 04:58
Nitrogen, Nitrate	2.1	0.05	1.000	04/29/09 04:58
Sulfate	220	5.0	10.00	04/29/09 13:44

Field ID:	SOURCE	Lab ID:	211757-007
Type:	SAMPLE	Sampled:	04/28/09 10:10

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Chloride	210	4.0	20.00	150466	04/29/09 23:36
Nitrogen, Nitrite	0.23	0.05	1.000	150426	04/29/09 05:50
Nitrogen, Nitrate	15	0.50	10.00	150426	04/29/09 14:01
Sulfate	100	5.0	10.00	150426	04/29/09 14:01

Type:	BLANK	Batch#:	150426
Lab ID:	QC493661	Analyzed:	04/28/09 07:12
Diln Fac:	1.000		

Analyte	Result	RL
Chloride	ND	0.20
Nitrogen, Nitrite	ND	0.05
Nitrogen, Nitrate	ND	0.05
Sulfate	ND	0.50

Type:	BLANK	Batch#:	150466
Lab ID:	QC493820	Analyzed:	04/29/09 15:11
Diln Fac:	1.000		

Analyte	Result	RL
Chloride	ND	0.20

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Diln Fac:	1.000
Units:	mg/L	Batch#:	150426

Type:	BS	Analyzed:	04/28/09 07:49
Lab ID:	QC493662		

Analyte	Spiked	Result	%REC	Limits
Chloride	4.000	4.203	105	80-120
Nitrogen, Nitrite	1.000	1.055	106	80-120
Nitrogen, Nitrate	1.000	1.057	106	80-120
Sulfate	10.00	10.42	104	80-120

Type:	BSD	Analyzed:	04/28/09 08:06
Lab ID:	QC493663		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	4.000	4.218	105	80-120	0	20
Nitrogen, Nitrite	1.000	1.035	103	80-120	2	20
Nitrogen, Nitrate	1.000	1.055	105	80-120	0	20
Sulfate	10.00	10.48	105	80-120	1	20

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Field ID:	ZZZZZZZZZZ	Diln Fac:	20.00
MSS Lab ID:	211756-002	Batch#:	150426
Matrix:	Water	Sampled:	04/28/09 09:48
Units:	mg/L	Received:	04/28/09

Type:	MS	Analyzed:	04/29/09 08:10
Lab ID:	QC493671		

Analyte	MSS Result	Spiked	Result	%REC		Limits
Chloride	93.49	40.00	135.7	106		80-120
Nitrogen, Nitrite	0.1345	10.00	10.66	105		80-120
Nitrogen, Nitrate	0.8019	10.00	11.14	103		80-120
Sulfate	501.4	100.0	612.6	111	NM	80-120

Type:	MSD	Analyzed:	04/29/09 08:27
Lab ID:	QC493672		

Analyte	Spiked	Result	%REC		Limits	RPD	Lim
Chloride	40.00	134.5	102		80-120	1	20
Nitrogen, Nitrite	10.00	10.46	103		80-120	2	20
Nitrogen, Nitrate	10.00	10.90	101		80-120	2	20
Sulfate	100.0	602.1	101	NM	80-120	2	20

NM= Not Meaningful: Sample concentration > 4X spike concentration

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Diln Fac:	1.000
Units:	mg/L	Batch#:	150466

Type: BS
Analyzed: 04/29/09 15:46
Lab ID: QC493821

Analyte	Spiked	Result	%REC	Limits
Chloride	4.000	4.297	107	80-120

Type: BSD
Analyzed: 04/29/09 16:03
Lab ID: QC493822

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	4.000	4.292	107	80-120	0	20

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Field ID:	ZZZZZZZZZZ	Diln Fac:	5.000
MSS Lab ID:	211772-002	Batch#:	150466
Matrix:	Water	Sampled:	04/29/09 09:05
Units:	mg/L	Received:	04/29/09

Type: MS Analyzed: 04/29/09 21:17
Lab ID: QC493863

Analyte	MSS Result	Spiked	Result	%REC	Limits
Chloride	24.74	10.00	35.51	108	80-120

Type: MSD Analyzed: 04/29/09 21:34
Lab ID: QC493864

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	10.00	35.45	107	80-120	0	20

RPD= Relative Percent Difference

Alkalinity

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	04/28/09
Units:	mg/L	Received:	04/28/09
Batch#:	150530	Analyzed:	04/30/09

Field ID: MW-1　Lab ID: 211757-001
Type: SAMPLE

Analyte	Result	RL	Diln Fac
Alkalinity, Bicarbonate	370	6.7	6.700
Alkalinity, Carbonate	ND	6.7	6.700
Alkalinity, Hydroxide	6.7	0.70	0.7000
Alkalinity, Total as CaCO3	370	6.7	6.700

Field ID: MW-2　Lab ID: 211757-002
Type: SAMPLE　Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	340	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	340	6.7

Field ID: MW-3　Lab ID: 211757-003
Type: SAMPLE

Analyte	Result	RL	Diln Fac
Alkalinity, Bicarbonate	490	0.70	0.7000
Alkalinity, Carbonate	ND	6.7	6.700
Alkalinity, Hydroxide	ND	6.7	6.700
Alkalinity, Total as CaCO3	490	6.7	6.700

Field ID: MW-4　Lab ID: 211757-004
Type: SAMPLE　Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	490	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	490	6.7

Field ID: L5 COMP　Lab ID: 211757-005
Type: SAMPLE　Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	640	6.7
Alkalinity, Carbonate	69	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	710	6.7

ND= Not Detected
RL= Reporting Limit

Alkalinity

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	04/28/09
Units:	mg/L	Received:	04/28/09
Batch#:	150530	Analyzed:	04/30/09

Field ID:	L10 COMP	Lab ID:	211757-006
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	660	6.7
Alkalinity, Carbonate	65	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	720	6.7

Field ID:	SOURCE	Lab ID:	211757-007
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	200	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	200	6.7

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC494081		

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Alkalinity

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Units:	mg/L
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC494082	Batch#:	150530
Matrix:	Water	Analyzed:	04/30/09

Spiked	**Result**	**%REC**	**Limits**
200.0	195.6	98	90-110

Batch QC Report

Alkalinity

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Diln Fac:	4.000
Field ID:	ZZZZZZZZZZ	Batch#:	150530
MSS Lab ID:	211753-002	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	mg/L	Analyzed:	04/30/09

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**
MS	QC494083	296.7	200.0	488.0	96	80-120		
MSD	QC494084		200.0	486.4	95	80-120	0	25

RPD= Relative Percent Difference

Total Cyanide

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	150664
Field ID:	SOURCE	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	mg/L	Analyzed:	05/05/09
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	211757-007	0.02	0.01
BLANK	QC494616	ND	0.01

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Cyanide

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	150664
MSS Lab ID:	211809-001	Sampled:	04/30/09
Matrix:	Water	Received:	04/30/09
Units:	mg/L	Analyzed:	05/05/09

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**
MS	QC494617	<0.01000	0.2000	0.2172	109	64-130		
MSD	QC494618		0.2000	0.2155	108	64-130	1	20
LCS	QC494619		0.2000	0.2088	104	80-123		

RPD= Relative Percent Difference

Dissolved Organic Carbon (DOC)

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Batch#:	150675
Matrix:	Water	Sampled:	04/28/09
Units:	mg/L	Received:	04/28/09
Diln Fac:	1.000	Analyzed:	05/06/09

Field ID	**Type**	**Lab ID**	**Result**	**RL**
MW-1	SAMPLE	211757-001	ND	1.0
MW-2	SAMPLE	211757-002	ND	1.0
MW-3	SAMPLE	211757-003	ND	1.0
MW-4	SAMPLE	211757-004	ND	1.0
L5 COMP	SAMPLE	211757-005	7.8	1.0
L10 COMP	SAMPLE	211757-006	2.7	1.0
SOURCE	SAMPLE	211757-007	7.2	1.0
	BLANK	QC494661	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Dissolved Organic Carbon (DOC)

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Batch#:	150675
Field ID:	ZZZZZZZZZZ	Sampled:	05/05/09
MSS Lab ID:	211927-003	Received:	05/05/09
Units:	mg/L	Analyzed:	05/06/09

Type	Lab ID	Matrix	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
LCS	QC494662	Water		10.00	9.233	92	90-110			1.000
MS	QC494663	Filtrate	86.14	40.00	125.5	98	80-121			20.00
MSD	QC494664	Filtrate		40.00	123.4	93	80-121	2	20	20.00

RPD= Relative Percent Difference

Surfactants (MBAS)

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	150481
Field ID:	SOURCE	Sampled:	04/28/09 10:10
Matrix:	Water	Received:	04/28/09
Units:	mg/L	Prepared:	04/29/09 16:15
Diln Fac:	1.000	Analyzed:	04/30/09 16:52

Type	Lab ID	Result	RL
SAMPLE	211757-007	ND	0.20
BLANK	QC493873	ND	0.20

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Surfactants (MBAS)

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	150481
Field ID:	SOURCE	Sampled:	04/28/09 10:10
MSS Lab ID:	211757-007	Received:	04/28/09
Matrix:	Water	Prepared:	04/29/09 16:15
Units:	mg/L	Analyzed:	04/30/09 16:52
Diln Fac:	1.000		

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**
LCS	QC493874		0.6000	0.6316	105	80-120		
MS	QC493875	<0.2000	0.6000	0.5319	89	70-130		
MSD	QC493876		0.6000	0.6129	102	70-130	14	30

RPD= Relative Percent Difference

Total Phosphorous

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	mg/L	Analyzed:	04/29/09
Batch#:	150454		

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	211757-001	0.11	0.030	1.000
MW-2	SAMPLE	211757-002	0.035	0.030	1.000
MW-3	SAMPLE	211757-003	0.041	0.030	1.000
MW-4	SAMPLE	211757-004	0.065	0.030	1.000
L5 COMP	SAMPLE	211757-005	0.042	0.030	1.000
L10 COMP	SAMPLE	211757-006	ND	0.030	1.000
SOURCE	SAMPLE	211757-007	0.62	0.050	1.667
	BLANK	QC493774	ND	0.030	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Phosphorous

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Batch#:	150454
Field ID:	ZZZZZZZZZZ	Sampled:	04/22/09
MSS Lab ID:	211639-001	Received:	04/23/09
Matrix:	Water	Analyzed:	04/29/09
Units:	mg/L		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
LCS	QC493775		0.3960	0.3757	95	80-123			1.000
MS	QC493776	<0.03000	0.3960	0.3728	94	18-179			1.667
MSD	QC493777		0.3960	0.3706	94	18-179	1	35	1.667

RPD= Relative Percent Difference

Total Dissolved Solids (TDS)

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Sampled:	04/28/09
Matrix:	Water	Received:	04/28/09
Units:	mg/L	Prepared:	04/29/09
Batch#:	150474	Analyzed:	04/30/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	211757-001	550	10	1.000
MW-2	SAMPLE	211757-002	440	10	1.000
MW-3	SAMPLE	211757-003	760	10	1.000
MW-4	SAMPLE	211757-004	720	10	1.000
L5 COMP	SAMPLE	211757-005	2,000	14	1.429
L10 COMP	SAMPLE	211757-006	1,070	11	1.111
SOURCE	SAMPLE	211757-007	800	10	1.000
	BLANK	QC493844	ND	10	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Dissolved Solids (TDS)

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Batch#:	150474
Field ID:	ZZZZZZZZZZ	Sampled:	04/27/09
MSS Lab ID:	211731-001	Received:	04/27/09
Matrix:	Water	Prepared:	04/29/09
Units:	mg/L	Analyzed:	04/30/09
Diln Fac:	1.000		

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**RL**	**%REC**	**Limits**	**RPD**	**Lim**
BS	QC493845		104.0	102.0		98	75-120		
BSD	QC493846		104.0	102.0		98	75-120	0	20
SDUP	QC493847	586.0		572.0	10.00			2	20

RL= Reporting Limit
RPD= Relative Percent Difference

Total Organic Carbon (TOC)

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Batch#:	150506
Matrix:	Water	Sampled:	04/28/09
Units:	mg/L	Received:	04/28/09
Diln Fac:	1.000	Analyzed:	05/01/09

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	211757-001	ND	0.50
MW-2	SAMPLE	211757-002	ND	0.50
MW-3	SAMPLE	211757-003	0.61	0.50
MW-4	SAMPLE	211757-004	0.64	0.50
L5 COMP	SAMPLE	211757-005	8.7	0.50
L10 COMP	SAMPLE	211757-006	3.1	0.50
SOURCE	SAMPLE	211757-007	8.0	0.50
	BLANK	QC493966	ND	0.50

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Organic Carbon (TOC)

Lab #:	211757	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Batch#:	150506
Field ID:	ZZZZZZZZZZ	Sampled:	04/29/09
MSS Lab ID:	211798-001	Received:	04/30/09
Matrix:	Water	Analyzed:	05/01/09
Units:	mg/L		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim	Diln Fac
LCS	QC493967		10.00	10.01	100	90-110			1.000
MS	QC493968	1.587	10.00	11.70	101	58-122			2.000
MSD	QC493969		10.00	11.62	100	58-122	1	20	2.000

RPD= Relative Percent Difference

Laboratory Job Number 211757

Subcontracted Products

Weck Laboratories, Inc.

Certificate of Analysis

Report Date: Tuesday, May 12, 2009
Received Date: Thursday, April 30, 2009
Received Time: 8:00 am
Turnaround Time: Normal

Client: Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Attn: Anna M. Pajarillo
Project: 211757

Phones: (800) 522-1878
Fax: (510) 486-0532

P.O. #:

Lab Sample ID: 9D30004-01 **Sample ID:** **MW-1** **Matrix:** Water
Sampled by: Client **Sampled: 04/28/09 09:00** **Sample Note: 211757-001**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 21:37 cwn	W9E0173	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 21:37 cwn	W9E0173	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 21:37 cwn	W9E0173	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 21:37 cwn	W9E0173	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 21:37 cwn	W9E0173	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 21:37 cwn	W9E0173	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 21:37 cwn	W9E0173	
Surrogate: 2,3-Dibromopropionic acid	*112 %*		*70-130*							

Lab Sample ID: 9D30004-02 **Sample ID:** **MW-2** **Matrix:** Water
Sampled by: Client **Sampled: 04/28/09 10:10** **Sample Note: 211757-002**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:02 cwn	W9E0173	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:02 cwn	W9E0173	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:02 cwn	W9E0173	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:02 cwn	W9E0173	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:02 cwn	W9E0173	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:02 cwn	W9E0173	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:02 cwn	W9E0173	
Surrogate: 2,3-Dibromopropionic acid	*108 %*		*70-130*							

Lab Sample ID: 9D30004-03 **Sample ID:** **MW-3** **Matrix:** Water
Sampled by: Client **Sampled: 04/28/09 12:20** **Sample Note: 211757-003**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:28 cwn	W9E0173	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:28 cwn	W9E0173	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:28 cwn	W9E0173	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:28 cwn	W9E0173	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:28 cwn	W9E0173	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:28 cwn	W9E0173	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:28 cwn	W9E0173	

Certificate of Analysis

Lab Sample ID: 9D30004-03 **Sample ID:** **MW-3** **Matrix:** Water
Sampled by: Client **Sampled: 04/28/09 12:20** **Sample Note: 211757-003**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Surrogate: 2,3-Dibromopropionic acid	*112 %*		*70-130*							

Lab Sample ID: 9D30004-04 **Sample ID:** **MW-4** **Matrix:** Water
Sampled by: Client **Sampled: 04/28/09 11:20** **Sample Note: 211757-004**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:53 cwn	W9E0173	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:53 cwn	W9E0173	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:53 cwn	W9E0173	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:53 cwn	W9E0173	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:53 cwn	W9E0173	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:53 cwn	W9E0173	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 22:53 cwn	W9E0173	
Surrogate: 2,3-Dibromopropionic acid	*109 %*		*70-130*							

Lab Sample ID: 9D30004-05 **Sample ID:** **L5 Comp** **Matrix:** Water
Sampled by: Client **Sampled: 04/28/09 00:00** **Sample Note: 211757-005**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 23:44 cwn	W9E0173	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 23:44 cwn	W9E0173	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 23:44 cwn	W9E0173	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 23:44 cwn	W9E0173	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 23:44 cwn	W9E0173	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 23:44 cwn	W9E0173	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/7/09 23:44 cwn	W9E0173	
Surrogate: 2,3-Dibromopropionic acid	*116 %*		*70-130*							

Lab Sample ID: 9D30004-06 **Sample ID:** **L10 Comp** **Matrix:** Water
Sampled by: Client **Sampled: 04/28/09 00:00** **Sample Note: 211757-006**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09 0:09 cwn	W9E0173	
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09 0:09 cwn	W9E0173	
Dichloroacetic acid (dcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09 0:09 cwn	W9E0173	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09 0:09 cwn	W9E0173	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09 0:09 cwn	W9E0173	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	5/6/09	5/8/09 0:09 cwn	W9E0173	
Trichloroacetic acid (tcaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09 0:09 cwn	W9E0173	
Surrogate: 2,3-Dibromopropionic acid	*106 %*		*70-130*							

Lab Sample ID: 9D30004-07 **Sample ID:** **Source** **Matrix:** Water
Sampled by: Client **Sampled: 04/28/09 10:10** **Sample Note: 211757-007**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	**1.4**		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09 0:35 cwn	W9E0173	

Certificate of Analysis

Lab Sample ID: 9D30004-07 **Sample ID:** **Source** **Matrix:** Water
Sampled by: Client **Sampled: 04/28/09 10:10** **Sample Note: 211757-007**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed			Batch	Qualifier
Dibromoacetic acid (dbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09	0:35	cwn	W9E0173	
Dichloroacetic acid (dcaa)	**3.7**		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09	0:35	cwn	W9E0173	
HAA5, Total	**8.8**		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09	0:35	cwn	W9E0173	
Monobromoacetic acid (mbaa)	ND		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09	0:35	cwn	W9E0173	
Monochloroacetic acid (mcaa)	ND		2.0	ug/l	1	EPA 552.2	5/6/09	5/8/09	0:35	cwn	W9E0173	
Trichloroacetic acid (tcaa)	**5.1**		1.0	ug/l	1	EPA 552.2	5/6/09	5/8/09	0:35	cwn	W9E0173	
Surrogate: 2,3-Dibromopropionic acid	*111 %*		*70-130*									

Certificate of Analysis

Quality Control Section

HAAs by EPA 552.2 - Quality Control

Batch W9E0173 - EPA 552.2

Blank (W9E0173-BLK1) **Prepared: 05/06/09 Analyzed: 05/07/09 19:07**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*12.7*		ug/l	*10.0*	*127*	*70-130*		
Monochloroacetic acid (mcaa)		ND		ug/l					
Monobromoacetic acid (mbaa)		ND		ug/l					
Dichloroacetic acid (dcaa)		ND		ug/l					
Trichloroacetic acid (tcaa)		ND		ug/l					
Bromochloroacetic acid (bcaa)		ND		ug/l					
Dibromoacetic acid (dbaa)		ND		ug/l					
HAA5, Total		ND		ug/l					

LCS (W9E0173-BS1) **Prepared: 05/06/09 Analyzed: 05/07/09 19:32**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.40*		ug/l	*10.0*	*94*	*70-130*		
Monochloroacetic acid (mcaa)		9.06		ug/l	10.0	91	70-130		
Monobromoacetic acid (mbaa)		9.56		ug/l	10.0	96	70-130		
Dichloroacetic acid (dcaa)		9.43		ug/l	10.0	94	70-130		
Trichloroacetic acid (tcaa)		9.20		ug/l	10.0	92	70-130		
Bromochloroacetic acid (bcaa)		9.34		ug/l	10.0	93	70-130		
Dibromoacetic acid (dbaa)		9.76		ug/l	10.0	98	70-130		

Matrix Spike (W9E0173-MS1) **Source: 9D30004-01** **Prepared: 05/06/09 Analyzed: 05/07/09 19:56**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.11*		ug/l	*10.0*	*91*	*70-130*		
Monochloroacetic acid (mcaa)	ND	9.98		ug/l	10.0	100	70-130		
Monobromoacetic acid (mbaa)	ND	10.6		ug/l	10.0	106	70-130		
Dichloroacetic acid (dcaa)	ND	10.7		ug/l	10.0	107	70-130		
Trichloroacetic acid (tcaa)	ND	9.86		ug/l	10.0	99	70-130		
Bromochloroacetic acid (bcaa)	ND	10.6		ug/l	10.0	106	70-130		
Dibromoacetic acid (dbaa)	ND	10.9		ug/l	10.0	109	70-130		

Matrix Spike (W9E0173-MS2) **Source: 9D30004-02** **Prepared: 05/06/09 Analyzed: 05/07/09 20:47**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*10.7*		ug/l	*10.0*	*107*	*70-130*		
Monochloroacetic acid (mcaa)	ND	11.3		ug/l	10.0	113	70-130		
Monobromoacetic acid (mbaa)	ND	11.8		ug/l	10.0	118	70-130		
Dichloroacetic acid (dcaa)	ND	11.9		ug/l	10.0	119	70-130		
Trichloroacetic acid (tcaa)	ND	11.2		ug/l	10.0	112	70-130		
Bromochloroacetic acid (bcaa)	ND	11.8		ug/l	10.0	118	70-130		
Dibromoacetic acid (dbaa)	ND	12.0		ug/l	10.0	120	70-130		

Matrix Spike Dup (W9E0173-MSD1) **Source: 9D30004-01** **Prepared: 05/06/09 Analyzed: 05/07/09 20:21**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit

Certificate of Analysis

HAAs by EPA 552.2 - Quality Control

Batch W9E0173 - EPA 552.2

Matrix Spike Dup (W9E0173-MSD1) **Source: 9D30004-01** **Prepared: 05/06/09** **Analyzed: 05/07/09 20:21**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.82*		ug/l	*10.0*	*98*	*70-130*		
Monochloroacetic acid (mcaa)	ND	10.6		ug/l	10.0	106	70-130	6	30
Monobromoacetic acid (mbaa)	ND	11.0		ug/l	10.0	110	70-130	3	30
Dichloroacetic acid (dcaa)	ND	11.2		ug/l	10.0	112	70-130	5	30
Trichloroacetic acid (tcaa)	ND	10.8		ug/l	10.0	108	70-130	9	30
Bromochloroacetic acid (bcaa)	ND	10.8		ug/l	10.0	108	70-130	2	30
Dibromoacetic acid (dbaa)	ND	11.4		ug/l	10.0	114	70-130	5	30

Matrix Spike Dup (W9E0173-MSD2) **Source: 9D30004-02** **Prepared: 05/06/09** **Analyzed: 05/07/09 21:12**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*12.2*		ug/l	*10.0*	*122*	*70-130*		
Monochloroacetic acid (mcaa)	ND	9.00		ug/l	10.0	90	70-130	22	30
Monobromoacetic acid (mbaa)	ND	12.0		ug/l	10.0	120	70-130	2	30
Dichloroacetic acid (dcaa)	ND	11.6		ug/l	10.0	116	70-130	2	30
Trichloroacetic acid (tcaa)	ND	12.1		ug/l	10.0	121	70-130	8	30
Bromochloroacetic acid (bcaa)	ND	12.7		ug/l	10.0	127	70-130	7	30
Dibromoacetic acid (dbaa)	ND	12.4		ug/l	10.0	124	70-130	3	30

Certificate of Analysis

Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Kim Tu

Authorized Signature

Contact: Kim G Tu (Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
Dil	Dilution Factor
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 536418

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 05-01-2009

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 04-28-2009
Date of Receipt: 04-28-2009
Date of Report: 05-01-2009

HETEROTROPHIC PLATE COUNT REPORT

Location:	MW-1	MW-2	MW-3
Comments (see below)	None	None	None
Lab ID-Version‡:	2378469-1	2378471-1	2378473-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	04/28/2009 at 02:00 PM	04/28/2009 at 02:00 PM	04/28/2009 at 02:00 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	2,300	730	510

Comments:

Location:	MW-4	L5-Comp	L10-Comp
Comments (see below)	None	None	None
Lab ID-Version‡:	2378475-1	2378477-1	2378479-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	04/28/2009 at 02:00 PM	04/28/2009 at 02:00 PM	04/28/2009 at 02:00 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	1,000	560	300

Comments:

Location:	Source
Comments (see below)	None
Lab ID-Version‡:	2378481-1
Sample Type	Water sample
Method	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10
Setup Time	04/28/2009 at 02:00 PM
Incubation Info	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml
CFU/Reporting Unit	> 57,000

Comments:

* Estimated result

‡ A "Version" greater than 1 indicates amended data.

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 536418

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 05-01-2009
MPN-Standard Bacteria: 05-04-2009

Project SOPs: MPN-Standard Bacteria (100130)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 04-28-2009
Date of Receipt: 04-28-2009
Date of Report: 05-04-2009

MPN REPORT

Location: MW-1
Lab ID-Version‡: 2378468-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	04/28/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	04/28/09 14:00	< 2	-	14
E. coli	SM 9221 F	04/28/09 14:00	< 2	-	14

Comments:

Location: MW-2
Lab ID-Version‡: 2378470-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	04/28/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	04/28/09 14:00	< 2	-	14
E. coli	SM 9221 F	04/28/09 14:00	< 2	-	14

Comments:

Location: MW-3
Lab ID-Version‡: 2378472-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	04/28/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	04/28/09 14:00	< 2	-	14
E. coli	SM 9221 F	04/28/09 14:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 04-28-2009
Date of Receipt: 04-28-2009
Date of Report: 05-04-2009

MPN REPORT

Location: MW-4 Lab ID-Version‡: 2378474-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	04/28/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	04/28/09 14:00	< 2	-	14
E. coli	SM 9221 F	04/28/09 14:00	< 2	-	14

Comments:

Location: L5-Comp Lab ID-Version‡: 2378476-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	04/28/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	04/28/09 14:00	< 2	-	14
E. coli	SM 9221 F	04/28/09 14:00	< 2	-	14

Comments:

Location: L10-Comp Lab ID-Version‡: 2378478-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	04/28/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	04/28/09 14:00	< 2	-	14
E. coli	SM 9221 F	04/28/09 14:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 04-28-2009
Date of Receipt: 04-28-2009
Date of Report: 05-04-2009

MPN REPORT

Location: Source

Lab ID-Version‡: 2378480-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	04/28/09 14:00	8	3	26
Total Coliform	SM 9221 B	04/28/09 14:00	24	8	72
E. coli	SM 9221 F	04/28/09 14:00	8	3	26

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
06/04/2009
MWH LABORATORIES

RCZ: Richard.C.Zimmer

Project Manager

ACCREDITED IN ACCORDANCE WITH nelac
01114CA

Report#: 305575
Project:
RECYCLED-WATER-STUDY
Group: Chemistry
PO#: 30-12408

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 305575
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Richard.C.Zimmer
Phone: 626-386-1157
PO #: 30-12408

The following samples were received from you on **April 29, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id			Matrix	Sample Date
200904290023	L-5 Composite			Water	28-Apr-2009 0000
	@PFC				
200904290024	L-10 Composite			Water	28-Apr-2009 0000
	@NDMA_SPE	@PFC			
200904290025	MW-1			Water	28-Apr-2009 0900
	@NDMA_SPE	@PFC			
200904290026	MW-2			Water	28-Apr-2009 1010
	@NDMA_SPE	@PFC			
200904290027	MW-3			Water	28-Apr-2009 1220
	@NDMA_SPE	@PFC			
200904290028	MW-4			Water	28-Apr-2009 1120
	@NDMA_SPE	@PFC			
200904290029	Source			Water	28-Apr-2009 1010
	@525PLUS	@NDMA_SPE	@PFC		
	EDTA				

Test Description

@525PLUS -- Semivolatiles by GCMS

@NDMA_SPE -- Nitrosamines by GCMS

@PFC -- Perfluorinated compounds

305575

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLES CHECKED AGAINST COC BY:

SAMPLES LOGGED IN BY: JS.

SAMPLE TEMP WHEN REC'D AT LAB: 2° (Compliance: 4 +/- 2°C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ✓ **PARTIALLY FROZEN** ___ **THAWED** ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

COMPLIANCE SAMPLES ☐ (check for yes)
- Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: Locus

P.O.# / PROJECT JOB #: 27011-07-7000

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), ***OR***
list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE:

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA	PFC's	EDTA	EPA525+	SAMPLER COMMENTS
4/28/09	comp	L5 Comp	IDT	RGW		X	0	1	0	0	
	comp	3/24 L10 Comp				X	1	1	0	0	
	900	MW-1			X		2	1	0	0	
	1010	MW-2			X		2	1	0	0	
	1220	MW-3			X		2	1	0	0	
	1120	MW-4			X		2	1	0	0	
	1010	Source			X		2	1	1	2	

*** MATRIX TYPES:**

RSW = Raw Surface Water	**CFW** = Chlor(am)inated Finished Water	**CWW** = Chlorinated Waste Water	**BW** = Bottled Water	**SO** = Soil
RGW = Raw Ground Water	**FW** = Other Finished Water	**WW** = Other Waste Water	**SW** = Storm Water	**SL** = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		Henry Castro Jr	Locus Technologies	4/28/09	
RECEIVED BY:				04/29/09	08:55
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ______

PAGE ____ OF ____

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 305575

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
04/29/2009

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	200904290023	**L-5 Composite**				
05/18/2009 16:17	Perfluoro butanoic acid- PFBA		47		ng/L	20
05/18/2009 16:17	Perfluoro octanoic acid - PFOA		16		ng/L	5
	200904290024	**L-10 Composite**				
05/15/2009 15:35	N-Nitroso dimethylamine (NDMA)		2.0		ng/l	2
	200904290025	**MW-1**				
05/15/2009 16:19	N-Nitroso dimethylamine (NDMA)		2.7		ng/l	2
	200904290026	**MW-2**				
	200904290027	**MW-3**				
	200904290028	**MW-4**				
05/15/2009 18:30	N-Nitroso dimethylamine (NDMA)		2.4		ng/l	2
	200904290029	**Source**				
05/08/2009 11:59	N-Nitroso dimethylamine (NDMA)		420		ng/l	20
05/18/2009 18:12	Perfluoro octanesulfonate-PFOS		34		ng/L	5
05/18/2009 18:12	Perfluoro octanoic acid - PFOA		51		ng/L	5

L-5 Composite (200904290023) **Sampled on 04/28/2009 0000**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/18/2009 16:17	509626	(MWH PFC)	Perfluoro butanoic acid- PFBA	47	ng/L	20	1
	05/18/2009 16:17	509626	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	05/18/2009 16:17	509626	(MWH PFC)	Perfluoro octanoic acid - PFOA	16	ng/L	5	1
	05/18/2009 16:17	509626	(MWH PFC)	PFBA-C13	104	%		1
	05/18/2009 16:17	509626	(MWH PFC)	PFOA-C13	85	%		1
	05/18/2009 16:17	509626	(MWH PFC)	PFOS-C13	40	%		1

L-10 Composite (200904290024) **Sampled on 04/28/2009 0000**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/18/2009 17:15	509626	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	05/18/2009 17:15	509626	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	05/18/2009 17:15	509626	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	05/18/2009 17:15	509626	(MWH PFC)	PFBA-C13	101	%		1
	05/18/2009 17:15	509626	(MWH PFC)	PFOA-C13	79	%		1
	05/18/2009 17:15	509626	(MWH PFC)	PFOS-C13	31	%		1

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/12/2009	05/15/2009 15:35	511120	(EPA 521)	N-Nitroso dimethylamine (NDMA)	2.0	ng/l	2	1
5/12/2009	05/15/2009 15:35	511120	(EPA 521)	NDMA-D6	91	%		1

MW-1 (200904290025) **Sampled on 04/28/2009 0900**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/18/2009 17:26	509626	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	05/18/2009 17:26	509626	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	05/18/2009 17:26	509626	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	05/18/2009 17:26	509626	(MWH PFC)	PFBA-C13	109	%		1
	05/18/2009 17:26	509626	(MWH PFC)	PFOA-C13	83	%		1
	05/18/2009 17:26	509626	(MWH PFC)	PFOS-C13	25	%		1

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/12/2009	05/15/2009 16:19	511120	(EPA 521)	N-Nitroso dimethylamine (NDMA)	2.7	ng/l	2	1
5/12/2009	05/15/2009 16:19	511120	(EPA 521)	NDMA-D6	84	%		1

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
04/29/2009

MW-2 (200904290026) **Sampled on 04/28/2009 1010**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/18/2009 17:38	509626	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	05/18/2009 17:38	509626	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	05/18/2009 17:38	509626	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	05/18/2009 17:38	509626	(MWH PFC)	PFBA-C13	114	%		1
	05/18/2009 17:38	509626	(MWH PFC)	PFOA-C13	84	%		1
	05/18/2009 17:38	509626	(MWH PFC)	PFOS-C13	34	%		1

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/08/2009 09:04	510377	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
	05/08/2009 09:04	510377	(EPA 521)	NDMA-D6	87	%		1

MW-3 (200904290027) **Sampled on 04/28/2009 1220**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/18/2009 17:49	509626	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	05/18/2009 17:49	509626	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	05/18/2009 17:49	509626	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	05/18/2009 17:49	509626	(MWH PFC)	PFBA-C13	109	%		1
	05/18/2009 17:49	509626	(MWH PFC)	PFOA-C13	77	%		1
	05/18/2009 17:49	509626	(MWH PFC)	PFOS-C13	23	%		1

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/12/2009	05/15/2009 17:46	511120	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
5/12/2009	05/15/2009 17:46	511120	(EPA 521)	NDMA-D6	90	%		1

MW-4 (200904290028) **Sampled on 04/28/2009 1120**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/18/2009 18:01	509626	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	05/18/2009 18:01	509626	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	05/18/2009 18:01	509626	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	05/18/2009 18:01	509626	(MWH PFC)	PFBA-C13	114	%		1
	05/18/2009 18:01	509626	(MWH PFC)	PFOA-C13	86	%		1
	05/18/2009 18:01	509626	(MWH PFC)	PFOS-C13	34	%		1

Rounding on totals after summation.
(c) - indicates calculated results

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
04/29/2009

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/12/2009	05/15/2009 18:30	511120	(EPA 521)	N-Nitroso dimethylamine (NDMA)	2.4	ng/l	2	1
5/12/2009	05/15/2009 18:30	511120	(EPA 521)	NDMA-D6	96	%		1

Source (200904290029) **Sampled on 04/28/2009 1010**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/18/2009 18:12	509626	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	05/18/2009 18:12	509626	(MWH PFC)	Perfluoro octanesulfonate-PFOS	34	ng/L	5	1
	05/18/2009 18:12	509626	(MWH PFC)	Perfluoro octanoic acid - PFOA	51	ng/L	5	1
	05/18/2009 18:12	509626	(MWH PFC)	PFBA-C13	109	%		1
	05/18/2009 18:12	509626	(MWH PFC)	PFOA-C13	83	%		1
	05/18/2009 18:12	509626	(MWH PFC)	PFOS-C13	25	%		1

EPA 525.2 - Semivolatiles by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Aldrin	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1

Laboratory Data
Report: 305575

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
04/29/2009

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.05	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Heptachlor	ND	ug/L	0.03	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.05	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
5/5/2009	05/07/2009	11:54	510284	(EPA 525.2)	Malathion	ND	ug/L	0.1	1

Rounding on totals after summation.
(c) - indicates calculated results

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Thiobencarb	ND	ug/L	0.2	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	99	%		1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Perylene-d12	85	%		1
5/5/2009	05/07/2009 11:54	510284	(EPA 525.2)	Triphenylphosphate	112	%		1

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/08/2009 11:59	510377	(EPA 521)	N-Nitroso dimethylamine (NDMA)	420	ng/l	20	10
	05/08/2009 11:59	510377	(EPA 521)	NDMA-D6	102	%		1

MWH_MET - NTA and EDTA by Ion Chromatography

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	05/12/2009 22:27	510290	(MWH_MET)	EDTA	ND	mg/L	0.1	1

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Comments
Report: #305575

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Group Comments

PFOS internal standard recoveries were below internal limits but within method acceptance ranges. Isotope dilution was also employed to compensate for matrix effect. Therefore, data is acceptable for reporting.

NDBA (EPA 521) MRL Check recovery was high. However, NDBA is not required for reporting. NDMA data is acceptable based on passing NDMA LCS and other QC.

The Comments Report may be blank if there are no comments for this report.

QC Ref # 509626 - Perfluorinated compounds		**Analysis Date: 05/18/2009**
200904290023	L-5 Composite	Analyzed by: LHZ
200904290024	L-10 Composite	Analyzed by: LHZ
200904290025	MW-1	Analyzed by: LHZ
200904290026	MW-2	Analyzed by: LHZ
200904290027	MW-3	Analyzed by: LHZ
200904290028	MW-4	Analyzed by: LHZ
200904290029	Source	Analyzed by: LHZ
QC Ref # 510284 - Semivolatiles by GCMS		**Analysis Date: 05/07/2009**
200904290029	Source	Analyzed by: JWC
QC Ref # 510290 - NTA and EDTA by Ion Chromatography		**Analysis Date: 05/12/2009**
200904290029	Source	Analyzed by: LMR
QC Ref # 510377 - Nitrosamines by GCMS		**Analysis Date: 05/08/2009**
200904290026	MW-2	Analyzed by: KAM
200904290029	Source	Analyzed by: KAM
QC Ref # 511120 - Nitrosamines by GCMS		**Analysis Date: 05/15/2009**
200904290024	L-10 Composite	Analyzed by: KAM
200904290025	MW-1	Analyzed by: KAM
200904290027	MW-3	Analyzed by: KAM
200904290028	MW-4	Analyzed by: KAM

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QC Ref# 509626 - Perfluorinated compounds by MWH PFC — Analysis Date: 05/18/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluoro butanoic acid- PFBA		50	48.1	ng/L	96	(70-130)		
LCS2	Perfluoro butanoic acid- PFBA		50	52.7	ng/L	105	(70-130)	20	9.1
MBLK	Perfluoro butanoic acid- PFBA			<6.6	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		20	20.8	ng/L	104	(50-150)		
MS_200904290023	Perfluoro butanoic acid- PFBA	47	50	102	ng/l	110	(50-150)		
MSD_200904290023	Perfluoro butanoic acid- PFBA	47	50	98.2	ng/l	103	(50-150)	30	3.8
LCS1	Perfluoro octanesulfonate-PFOS		50	56.0	ng/L	112	(70-130)		
LCS2	Perfluoro octanesulfonate-PFOS		50	50.2	ng/L	100	(70-130)	20	11
MBLK	Perfluoro octanesulfonate-PFOS			<1.6	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		5.0	3.11	ng/L	62	(50-150)		
MS_200904290023	Perfluoro octanesulfonate-PFOS	ND	50	53.8	ng/l	108	(50-150)		
MSD_200904290023	Perfluoro octanesulfonate-PFOS	ND	50	55.6	ng/l	111	(50-150)	30	3.3
LCS1	Perfluoro octanoic acid - PFOA		50	52.1	ng/L	104	(70-130)		
LCS2	Perfluoro octanoic acid - PFOA		50	54.1	ng/L	108	(70-130)	20	3.8
MBLK	Perfluoro octanoic acid - PFOA			<1.6	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	6.16	ng/L	123	(50-150)		
MS_200904290023	Perfluoro octanoic acid - PFOA	16	50	74.4	ng/l	118	(50-150)		
MSD_200904290023	Perfluoro octanoic acid - PFOA	16	50	75.6	ng/l	120	(50-150)	30	1.6
LCS1	PFBA-C13 (I)			105	%	105	(50-150)		
LCS2	PFBA-C13 (I)			99.9	%	100	(50-150)		
MBLK	PFBA-C13 (I)			94.9	%	95	(50-150)		
MRL_CHK	PFBA-C13 (I)			105	%	105	(50-150)		
MS_200904290023	PFBA-C13 (I)			102	%	102	(50-150)		
MSD_200904290023	PFBA-C13 (I)			105	%	105	(50-150)		
LCS1	PFOA-C13 (I)			93.2	%	93	(50-150)		
LCS2	PFOA-C13 (I)			95.3	%	95	(50-150)		
MBLK	PFOA-C13 (I)			92.5	%	93	(50-150)		
MRL_CHK	PFOA-C13 (I)			92.2	%	92	(50-150)		
MS_200904290023	PFOA-C13 (I)			81.5	%	82	(50-150)		
MSD_200904290023	PFOA-C13 (I)			79.7	%	80	(50-150)		
LCS1	PFOS-C13 (I)			106	%	106	(50-150)		
LCS2	PFOS-C13 (I)			97.9	%	98	(50-150)		
MBLK	PFOS-C13 (I)			91.5	%	92	(50-150)		
MRL_CHK	PFOS-C13 (I)			92.3	%	92	(50-150)		
MS_200904290023	PFOS-C13 (I)			29.6	%	**30**	(50-150)		
MSD_200904290023	PFOS-C13 (I)			28.6	%	**29**	(50-150)		

QC Ref# 510239 - Nitrosamines by GCMS by EPA 521 — Analysis Date: 05/07/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	N-Nitroso dimethylamine (NDMA)		40	34.5	ng/l	86	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

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(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/l				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	2.54	ng/l	127	(50-150)		
MS1_200905070101	N-Nitroso dimethylamine (NDMA)	2.5	2.0	4.14	ng/l	81	(50-150)		
MSD1_200905070101	N-Nitroso dimethylamine (NDMA)	2.5	2.0	3.86	ng/l	67	(50-150)	20	7.1
LCS1	NDMA-D6 (S)				%	85	(70-130)		
MBLK	NDMA-D6 (S)				%	87	(70-130)		
MRL_CHK	NDMA-D6 (S)				%	86	(70-130)		
MS1_200905070101	NDMA-D6 (S)				%	80	(70-130)		
MSD1_200905070101	NDMA-D6 (S)				%	79	(70-130)		

QC Ref# 510284 - Semivolatiles by GCMS by EPA 525.2 **Analysis Date: 05/07/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,3-Dimethyl-2-nitrobenzene (S)				%	97	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)				%	97	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)				%	97	(70-130)		
MRLMD	1,3-Dimethyl-2-nitrobenzene (S)				%	97	(70-130)		
MS_200904290279	1,3-Dimethyl-2-nitrobenzene (S)				%	99	(70-130)		
LCS1	2,4-Dinitrotoluene		2.0	1.77	ug/L	89	(70-130)		
LCS2	2,4-Dinitrotoluene		2.0	1.79	ug/L	90	(70-130)	20	1.1
MBLK	2,4-Dinitrotoluene			<0.05	ug/L				
MS_200904290279	2,4-Dinitrotoluene	ND	2.0	1.81	ug/L	91	(70-130)		
LCS1	2,6-Dinitrotoluene		2.0	1.79	ug/L	90	(70-130)		
LCS2	2,6-Dinitrotoluene		2.0	1.79	ug/L	89	(70-130)	20	0.0
MBLK	2,6-Dinitrotoluene			<0.05	ug/L				
MS_200904290279	2,6-Dinitrotoluene	ND	2.0	1.89	ug/L	95	(70-130)		
LCS1	4,4-DDD		2.0	2.31	ug/L	115	(70-130)		
LCS2	4,4-DDD		2.0	2.28	ug/L	114	(70-130)	20	1.3
MBLK	4,4-DDD			<0.05	ug/L				
MS_200904290279	4,4-DDD	ND	2.0	2.23	ug/L	112	(70-130)		
LCS1	4,4-DDE		2.0	2.18	ug/L	109	(70-130)		
LCS2	4,4-DDE		2.0	2.17	ug/L	109	(70-130)	20	0.46
MBLK	4,4-DDE			<0.05	ug/L				
MS_200904290279	4,4-DDE	ND	2.0	2.00	ug/L	100	(70-130)		
LCS1	4,4-DDT		2.0	2.25	ug/L	113	(70-130)		
LCS2	4,4-DDT		2.0	2.29	ug/L	115	(70-130)	20	2.2
MBLK	4,4-DDT			<0.05	ug/L				
MS_200904290279	4,4-DDT	ND	2.0	2.1	ug/L	105	(70-130)		
LCS1	Acenaphthene		2.0	2.11	ug/L	105	(70-130)		
LCS2	Acenaphthene		2.0	2.08	ug/L	104	(70-130)	20	0.95
MBLK	Acenaphthene			<0.05	ug/L				
MS_200904290279	Acenaphthene	ND	2.0	1.98	ug/L	99	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

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(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Acenaphthylene		2.0	2.12	ug/L	106	(70-130)		
LCS2	Acenaphthylene		2.0	2.13	ug/L	106	(70-130)	20	0.47
MBLK	Acenaphthylene			<0.05	ug/L				
MS_200904290279	Acenaphthylene	ND	2.0	2.04	ug/L	102	(70-130)		
LCS1	Acetochlor		2.0	2.23	ug/L	111	(70-130)		
LCS2	Acetochlor		2.0	2.3	ug/L	115	(70-130)	20	3.1
MBLK	Acetochlor			<0.05	ug/L				
MS_200904290279	Acetochlor	ND	2.0	2.17	ug/L	109	(70-130)		
LCS1	Alachlor		2.0	2.27	ug/L	113	(70-130)		
LCS2	Alachlor		2.0	2.26	ug/L	113	(70-130)	20	0.44
MBLK	Alachlor			<0.025	ug/L				
MRLMD	Alachlor		0.05	0.0560	ug/L	112	(50-150)		
MS_200904290279	Alachlor	ND	2.0	2.16	ug/L	108	(70-130)		
LCS1	Aldrin		2.0	2.00	ug/L	100	(70-130)		
LCS2	Aldrin		2.0	1.99	ug/L	100	(70-130)	20	0.50
MBLK	Aldrin			<0.025	ug/L				
MRLMD	Aldrin		0.05	0.0310	ug/L	62	(50-150)		
MS_200904290279	Aldrin	ND	2.0	2.01	ug/L	100	(70-130)		
LCS1	Alpha-BHC		2.0	2.21	ug/L	111	(70-130)		
LCS2	Alpha-BHC		2.0	2.29	ug/L	115	(70-130)	20	3.6
MBLK	Alpha-BHC			<0.05	ug/L				
MS_200904290279	Alpha-BHC	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	alpha-Chlordane		2.0	2.17	ug/L	109	(70-130)		
LCS2	alpha-Chlordane		2.0	2.19	ug/L	109	(70-130)	20	0.92
MBLK	alpha-Chlordane			<0.025	ug/L				
MRLMD	alpha-Chlordane		0.05	0.0530	ug/L	106	(50-150)		
MS_200904290279	alpha-Chlordane	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Anthracene		2.0	2.14	ug/L	107	(70-130)		
LCS2	Anthracene		2.0	2.18	ug/L	109	(70-130)	20	1.9
MBLK	Anthracene			<0.01	ug/L				
MRLMD	Anthracene		0.05	0.0460	ug/L	92	(50-150)		
MS_200904290279	Anthracene	ND	2.0	1.96	ug/L	98	(70-130)		
LCS1	Atrazine		2.0	2.3	ug/L	115	(70-130)		
LCS2	Atrazine		2.0	2.39	ug/L	120	(70-130)	20	3.8
MBLK	Atrazine			<0.025	ug/L				
MRLMD	Atrazine		0.05	0.0570	ug/L	114	(50-150)		
MS_200904290279	Atrazine	ND	2.0	2.18	ug/L	109	(70-130)		
LCS1	Benz(a)Anthracene		2.0	2.21	ug/L	111	(70-130)		
LCS2	Benz(a)Anthracene		2.0	2.22	ug/L	111	(70-130)	20	0.45

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Benz(a)Anthracene			<0.025	ug/L				
MRLMD	Benz(a)Anthracene		0.05	0.0530	ug/L	106	(50-150)		
MS_200904290279	Benz(a)Anthracene	ND	2.0	2.06	ug/L	103	(70-130)		
LCS1	Benzo(a)pyrene		2.0	2.29	ug/L	114	(70-130)		
LCS2	Benzo(a)pyrene		2.0	2.35	ug/L	117	(70-130)	20	2.6
MBLK	Benzo(a)pyrene			<0.01	ug/L				
MRLMD	Benzo(a)pyrene		0.05	0.0530	ug/L	106	(50-150)		
MS_200904290279	Benzo(a)pyrene	ND	2.0	2.2	ug/L	110	(70-130)		
LCS1	Benzo(b)Fluoranthene		2.0	2.29	ug/L	114	(70-130)		
LCS2	Benzo(b)Fluoranthene		2.0	2.27	ug/L	114	(70-130)	20	0.88
MBLK	Benzo(b)Fluoranthene			<0.01	ug/L				
MRLMD	Benzo(b)Fluoranthene		0.05	0.0540	ug/L	108	(50-150)		
MS_200904290279	Benzo(b)Fluoranthene	ND	2.0	2.16	ug/L	108	(70-130)		
LCS1	Benzo(g,h,i)Perylene		2.0	2.33	ug/L	117	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2.0	2.36	ug/L	118	(70-130)	20	1.3
MBLK	Benzo(g,h,i)Perylene			<0.025	ug/L				
MRLMD	Benzo(g,h,i)Perylene		0.05	0.0470	ug/L	94	(50-150)		
MS_200904290279	Benzo(g,h,i)Perylene	ND	2.0	2.17	ug/L	108	(70-130)		
LCS1	Benzo(k)Fluoranthene		2.0	2.41	ug/L	120	(70-130)		
LCS2	Benzo(k)Fluoranthene		2.0	2.38	ug/L	119	(70-130)	20	0.83
MBLK	Benzo(k)Fluoranthene			<0.01	ug/L				
MRLMD	Benzo(k)Fluoranthene		0.05	0.0590	ug/L	118	(50-150)		
MS_200904290279	Benzo(k)Fluoranthene	ND	2.0	2.29	ug/L	114	(70-130)		
LCS1	Beta-BHC		2.0	2.25	ug/L	113	(70-130)		
LCS2	Beta-BHC		2.0	2.16	ug/L	108	(70-130)	20	4.5
MBLK	Beta-BHC			<0.05	ug/L				
MS_200904290279	Beta-BHC	ND	2.0	2.04	ug/L	102	(70-130)		
LCS1	Bromacil		2.0	2.12	ug/L	106	(70-130)		
LCS2	Bromacil		2.0	2.1	ug/L	105	(70-130)	20	0.47
MBLK	Bromacil			<0.05	ug/L				
MS_200904290279	Bromacil	ND	2.0	2.03	ug/L	101	(70-130)		
LCS1	Butachlor		2.0	2.27	ug/L	113	(70-130)		
LCS2	Butachlor		2.0	2.23	ug/L	112	(70-130)	20	1.8
MBLK	Butachlor			<0.025	ug/L				
MRLMD	Butachlor		0.05	0.0650	ug/L	130	(50-150)		
MS_200904290279	Butachlor	ND	2.0	2.13	ug/L	107	(70-130)		
LCS1	Butylbenzylphthalate		2.0	2.24	ug/L	112	(70-130)		
LCS2	Butylbenzylphthalate		2.0	2.25	ug/L	113	(70-130)	20	0.89
MBLK	Butylbenzylphthalate			<0.15	ug/L				

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200904290279	Butylbenzylphthalate	ND	2.0	2.13	ug/L	106	(70-130)		
LCS1	Caffeine by method 525mod		2.0	1.49	ug/L	75	(45-137)		
LCS2	Caffeine by method 525mod		2.0	1.35	ug/L	68	(45-137)	20	9.9
MBLK	Caffeine by method 525mod			<0.01	ug/L				
MRLMD	Caffeine by method 525mod		0.05	0.0330	ug/L	66	(50-150)		
MS_200904290279	Caffeine by method 525mod	ND	2.0	1.7	ug/L	85	(46-144)		
LCS1	Chlorobenzilate		2.0	2.22	ug/L	111	(70-130)		
LCS2	Chlorobenzilate		2.0	2.23	ug/L	111	(70-130)	20	0.45
MBLK	Chlorobenzilate			<0.05	ug/L				
MS_200904290279	Chlorobenzilate	ND	2.0	2.12	ug/L	106	(70-130)		
LCS1	Chloroneb		2.0	2.16	ug/L	108	(70-130)		
LCS2	Chloroneb		2.0	2.17	ug/L	108	(70-130)	20	0.46
MBLK	Chloroneb			<0.05	ug/L				
MS_200904290279	Chloroneb	ND	2.0	2.08	ug/L	104	(70-130)		
LCS1	Chlorothalonil(Draconil,Bravo)		2.0	2.27	ug/L	113	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2.0	2.26	ug/L	113	(70-130)	20	0.44
MBLK	Chlorothalonil(Draconil,Bravo)			<0.05	ug/L				
MS_200904290279	Chlorothalonil(Draconil,Bravo)	ND	2.0	2.11	ug/L	105	(70-130)		
LCS1	Chlorpyrifos (Dursban)		2.0	2.17	ug/L	109	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2.0	2.17	ug/L	108	(70-130)	20	0.0
MBLK	Chlorpyrifos (Dursban)			<0.025	ug/L				
MRLMD	Chlorpyrifos (Dursban)		0.05	0.0610	ug/L	122	(50-150)		
MS_200904290279	Chlorpyrifos (Dursban)	ND	2.0	2.1	ug/L	105	(70-130)		
LCS1	Chrysene		2.0	2.21	ug/L	110	(70-130)		
LCS2	Chrysene		2.0	2.18	ug/L	109	(70-130)	20	1.4
MBLK	Chrysene			<0.01	ug/L				
MRLMD	Chrysene		0.05	0.0520	ug/L	104	(50-150)		
MS_200904290279	Chrysene	ND	2.0	2.04	ug/L	102	(70-130)		
LCS1	Delta-BHC		2.0	2.12	ug/L	106	(70-130)		
LCS2	Delta-BHC		2.0	2.15	ug/L	108	(70-130)	20	1.4
MBLK	Delta-BHC			<0.05	ug/L				
MS_200904290279	Delta-BHC	ND	2.0	2.07	ug/L	103	(70-130)		
LCS1	Di(2-Ethylhexyl)phthalate		2.0	2.3	ug/L	115	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2.0	2.32	ug/L	116	(70-130)	20	0.87
MBLK	Di(2-Ethylhexyl)phthalate			<0.15	ug/L				
MS_200904290279	Di(2-Ethylhexyl)phthalate	ND	2.0	2.13	ug/L	106	(70-130)		
LCS1	Di-(2-Ethylhexyl)adipate		2.0	2.31	ug/L	116	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2.0	2.32	ug/L	116	(70-130)	20	0.0
MBLK	Di-(2-Ethylhexyl)adipate			<0.15	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200904290279	Di-(2-Ethylhexyl)adipate	ND	2.0	2.08	ug/L	104	(70-130)		
LCS1	Di-n-Butylphthalate		4.0	4.54	ug/L	114	(70-130)		
LCS2	Di-n-Butylphthalate		4.0	4.61	ug/L	115	(70-130)	20	1.5
MBLK	Di-n-Butylphthalate			<0.15	ug/L				
MS_200904290279	Di-n-Butylphthalate	ND	4.0	4.45	ug/L	111	(70-130)		
LCS1	Di-N-octylphthalate		2.0	2.18	ug/L	109	(70-130)		
LCS2	Di-N-octylphthalate		2.0	2.22	ug/L	111	(70-130)	20	1.8
MBLK	Di-N-octylphthalate			<0.05	ug/L				
MS_200904290279	Di-N-octylphthalate	ND	2.0	1.91	ug/L	96	(70-130)		
LCS1	Diazinon (Qualitative)		2.0	2.02	ug/L	101	(70-130)		
LCS2	Diazinon (Qualitative)		2.0	1.98	ug/L	99	(70-130)	20	2.0
MBLK	Diazinon (Qualitative)			<0.05	ug/L				
MS_200904290279	Diazinon (Qualitative)	ND	2.0	2.15	ug/L	108	(70-130)		
LCS1	Dibenz(a,h)Anthracene		2.0	2.39	ug/L	120	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2.0	2.38	ug/L	119	(70-130)	20	0.42
MBLK	Dibenz(a,h)Anthracene			<0.025	ug/L				
MRLMD	Dibenz(a,h)Anthracene		0.05	0.0500	ug/L	100	(50-150)		
MS_200904290279	Dibenz(a,h)Anthracene	ND	2.0	2.18	ug/L	109	(70-130)		
LCS1	Dichlorvos (DDVP)		2.0	1.96	ug/L	98	(70-130)		
LCS2	Dichlorvos (DDVP)		2.0	2.00	ug/L	100	(70-130)	20	2.0
MBLK	Dichlorvos (DDVP)			<0.025	ug/L				
MRLMD	Dichlorvos (DDVP)		0.05	0.0410	ug/L	82	(50-150)		
MS_200904290279	Dichlorvos (DDVP)	ND	2.0	1.98	ug/L	99	(70-130)		
LCS1	Dieldrin		2.0	2.1	ug/L	105	(70-130)		
LCS2	Dieldrin		2.0	2.02	ug/L	101	(70-130)	20	4.4
MBLK	Dieldrin			<0.05	ug/L				
MS_200904290279	Dieldrin	ND	2.0	2.07	ug/L	103	(70-130)		
LCS1	Diethylphthalate		2.0	2.1	ug/L	105	(70-130)		
LCS2	Diethylphthalate		2.0	2.04	ug/L	102	(70-130)	20	2.9
MBLK	Diethylphthalate			<0.15	ug/L				
MS_200904290279	Diethylphthalate	ND	2.0	2.00	ug/L	100	(70-130)		
LCS1	Dimethoate		2.0	1.28	ug/L	64	(35-100)		
LCS2	Dimethoate		2.0	1.2	ug/L	60	(35-100)	20	6.5
MBLK	Dimethoate			<0.05	ug/L				
MS_200904290279	Dimethoate	ND	2.0	1.35	ug/L	68	(34-111)		
LCS1	Dimethylphthalate		2.0	2.16	ug/L	108	(70-130)		
LCS2	Dimethylphthalate		2.0	2.13	ug/L	107	(70-130)	20	1.4
MBLK	Dimethylphthalate			<0.15	ug/L				
MS_200904290279	Dimethylphthalate	ND	2.0	2.06	ug/L	103	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Endosulfan I (Alpha)		2.0	2.18	ug/L	109	(70-130)		
LCS2	Endosulfan I (Alpha)		2.0	2.14	ug/L	107	(70-130)	20	1.9
MBLK	Endosulfan I (Alpha)			<0.05	ug/L				
MS_200904290279	Endosulfan I (Alpha)	ND	2.0	2.01	ug/L	100	(70-130)		
LCS1	Endosulfan II (Beta)		2.0	2.04	ug/L	102	(70-130)		
LCS2	Endosulfan II (Beta)		2.0	2.07	ug/L	104	(70-130)	20	1.5
MBLK	Endosulfan II (Beta)			<0.05	ug/L				
MS_200904290279	Endosulfan II (Beta)	ND	2.0	2.02	ug/L	101	(70-130)		
LCS1	Endosulfan Sulfate		2.0	2.21	ug/L	111	(70-130)		
LCS2	Endosulfan Sulfate		2.0	2.27	ug/L	113	(70-130)	20	2.7
MBLK	Endosulfan Sulfate			<0.05	ug/L				
MS_200904290279	Endosulfan Sulfate	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Endrin		2.0	2.24	ug/L	112	(70-130)		
LCS2	Endrin		2.0	2.28	ug/L	114	(70-130)	20	1.8
MBLK	Endrin			<0.05	ug/L				
MS_200904290279	Endrin	ND	2.0	2.44	ug/L	122	(70-130)		
LCS1	Endrin Aldehyde		2.0	2.15	ug/L	108	(70-130)		
LCS2	Endrin Aldehyde		2.0	2.09	ug/L	105	(70-130)	20	2.8
MBLK	Endrin Aldehyde			<0.05	ug/L				
MS_200904290279	Endrin Aldehyde	ND	2.0	1.84	ug/L	92	(70-130)		
LCS1	EPTC		2.0	2.19	ug/L	109	(70-130)		
LCS2	EPTC		2.0	2.18	ug/L	109	(70-130)	20	0.46
MBLK	EPTC			<0.05	ug/L				
MS_200904290279	EPTC	ND	2.0	2.05	ug/L	102	(70-130)		
LCS1	Fluoranthene		2.0	2.19	ug/L	110	(70-130)		
LCS2	Fluoranthene		2.0	2.21	ug/L	111	(70-130)	20	0.91
MBLK	Fluoranthene			<0.05	ug/L				
MS_200904290279	Fluoranthene	ND	2.0	2.1	ug/L	105	(70-130)		
LCS1	Fluorene		2.0	2.2	ug/L	110	(70-130)		
LCS2	Fluorene		2.0	2.18	ug/L	109	(70-130)	20	0.91
MBLK	Fluorene			<0.05	ug/L				
MRLMD	Fluorene		0.05	0.0580	ug/L	116	(50-150)		
MS_200904290279	Fluorene	ND	2.0	2.06	ug/L	103	(70-130)		
LCS1	gamma-Chlordane		2.0	2.24	ug/L	112	(70-130)		
LCS2	gamma-Chlordane		2.0	2.12	ug/L	106	(70-130)	20	5.5
MBLK	gamma-Chlordane			<0.025	ug/L				
MRLMD	gamma-Chlordane		0.05	0.0610	ug/L	122	(50-150)		
MS_200904290279	gamma-Chlordane	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Heptachlor		2.0	2.09	ug/L	105	(70-130)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Heptachlor		2.0	2.12	ug/L	106	(70-130)	20	1.4
MBLK	Heptachlor			<0.015	ug/L				
MRLMD	Heptachlor		0.05	0.0510	ug/L	102	(50-150)		
MS_200904290279	Heptachlor	ND	2.0	2.02	ug/L	101	(70-130)		
LCS1	Heptachlor Epoxide (isomer B)		2.0	2.09	ug/L	104	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2.0	2.15	ug/L	107	(70-130)	20	2.8
MBLK	Heptachlor Epoxide (isomer B)			<0.025	ug/L				
MRLMD	Heptachlor Epoxide (isomer B)		0.05	0.0640	ug/L	128	(50-150)		
MS_200904290279	Heptachlor Epoxide (isomer B)	ND	2.0	1.99	ug/L	100	(70-130)		
LCS1	Hexachlorobenzene		2.0	2.2	ug/L	110	(70-130)		
LCS2	Hexachlorobenzene		2.0	2.15	ug/L	108	(70-130)	20	2.3
MBLK	Hexachlorobenzene			<0.025	ug/L				
MRLMD	Hexachlorobenzene		0.15	0.164	ug/L	109	(50-150)		
MS_200904290279	Hexachlorobenzene	ND	2.0	2.09	ug/L	104	(70-130)		
LCS1	Hexachlorocyclopentadiene		2.0	2.12	ug/L	106	(70-130)		
LCS2	Hexachlorocyclopentadiene		2.0	2.12	ug/L	106	(70-130)	20	0.0
MBLK	Hexachlorocyclopentadiene			<0.025	ug/L				
MRLMD	Hexachlorocyclopentadiene		0.15	0.153	ug/L	102	(50-150)		
MS_200904290279	Hexachlorocyclopentadiene	ND	2.0	2.06	ug/L	103	(70-130)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2.0	2.29	ug/L	115	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2.0	2.31	ug/L	116	(70-130)	20	0.87
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.025	ug/L				
MRLMD	Indeno(1,2,3,c,d)Pyrene		0.05	0.0480	ug/L	96	(50-150)		
MS_200904290279	Indeno(1,2,3,c,d)Pyrene	ND	2.0	2.12	ug/L	106	(70-130)		
LCS1	Isophorone		2.0	2.01	ug/L	100	(70-130)		
LCS2	Isophorone		2.0	2.00	ug/L	100	(70-130)	20	0.50
MBLK	Isophorone			<0.25	ug/L				
MS_200904290279	Isophorone	ND	2.0	1.96	ug/L	98	(70-130)		
LCS1	Lindane		2.0	2.17	ug/L	109	(70-130)		
LCS2	Lindane		2.0	2.17	ug/L	108	(70-130)	20	0.0
MBLK	Lindane			<0.02	ug/L				
MRLMD	Lindane		0.05	0.0630	ug/L	126	(50-150)		
MS_200904290279	Lindane	ND	2.0	2.05	ug/L	102	(70-130)		
LCS1	Malathion		2.0	2.17	ug/L	109	(70-130)		
LCS2	Malathion		2.0	2.23	ug/L	112	(70-130)	20	2.7
MBLK	Malathion			<0.05	ug/L				
MS_200904290279	Malathion	ND	2.0	2.09	ug/L	105	(70-130)		
LCS1	Methoxychlor		2.0	2.31	ug/L	116	(70-130)		
LCS2	Methoxychlor		2.0	2.35	ug/L	117	(70-130)	20	1.3

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Methoxychlor			<0.05	ug/L				
MS_200904290279	Methoxychlor	ND	2.0	2.27	ug/L	114	(70-130)		
LCS1	Metolachlor		2.0	2.21	ug/L	111	(70-130)		
LCS2	Metolachlor		2.0	2.19	ug/L	110	(70-130)	20	0.91
MBLK	Metolachlor			<0.025	ug/L				
MRLMD	Metolachlor		0.05	0.0540	ug/L	108	(50-150)		
MS_200904290279	Metolachlor	ND	2.0	2.11	ug/L	105	(70-130)		
LCS1	Metribuzin		2.0	2.16	ug/L	108	(70-130)		
LCS2	Metribuzin		2.0	2.08	ug/L	104	(70-130)	20	3.3
MBLK	Metribuzin			<0.05	ug/L				
MRLMD	Metribuzin		0.05	0.0420	ug/L	84	(50-150)		
MS_200904290279	Metribuzin	ND	2.0	2.17	ug/L	109	(70-130)		
LCS1	Molinate		2.0	2.25	ug/L	112	(70-130)		
LCS2	Molinate		2.0	2.2	ug/L	110	(70-130)	20	2.3
MBLK	Molinate			<0.05	ug/L				
MS_200904290279	Molinate	ND	2.0	2.11	ug/L	106	(70-130)		
LCS1	Naphthalene		2.0	2.05	ug/L	102	(70-130)		
LCS2	Naphthalene		2.0	2.02	ug/L	101	(70-130)	20	1.5
MBLK	Naphthalene			<0.05	ug/L				
MS_200904290279	Naphthalene	ND	2.0	1.97	ug/L	99	(70-130)		
LCS1	Parathion		2.0	2.23	ug/L	111	(70-130)		
LCS2	Parathion		2.0	2.26	ug/L	113	(70-130)	20	1.3
MBLK	Parathion			<0.05	ug/L				
MS_200904290279	Parathion	ND	2.0	2.13	ug/L	107	(70-130)		
LCS1	Pendimethalin		2.0	2.18	ug/L	109	(70-130)		
LCS2	Pendimethalin		2.0	2.19	ug/L	110	(70-130)	20	0.46
MBLK	Pendimethalin			<0.05	ug/L				
MS_200904290279	Pendimethalin	ND	2.0	2.08	ug/L	104	(70-130)		
LCS1	Pentachlorophenol		8.0	9.06	ug/L	113	(70-130)		
LCS2	Pentachlorophenol		8.0	9.22	ug/L	115	(70-130)	20	1.8
MBLK	Pentachlorophenol			<0.6	ug/L				
MS_200904290279	Pentachlorophenol	ND	8.0	8.73	ug/L	109	(70-130)		
LCS1	Permethrin (mixed isomers)		4.0	4.47	ug/L	112	(70-130)		
LCS2	Permethrin (mixed isomers)		4.0	4.44	ug/L	111	(70-130)	20	0.67
MBLK	Permethrin (mixed isomers)			<0.1	ug/L				
MS_200904290279	Permethrin (mixed isomers)	ND	4.0	4.24	ug/L	106	(70-130)		
LCS1	Perylene-d12 (S)				%	92	(70-130)		
LCS2	Perylene-d12 (S)				%	93	(70-130)		
MBLK	Perylene-d12 (S)				%	78	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLMD	Perylene-d12 (S)				%	83	(70-130)		
MS_200904290279	Perylene-d12 (S)				%	90	(70-130)		
LCS1	Phenanthrene		2.0	2.09	ug/L	105	(70-130)		
LCS2	Phenanthrene		2.0	2.11	ug/L	106	(70-130)	20	0.95
MBLK	Phenanthrene			<0.02	ug/L				
MRLMD	Phenanthrene		0.05	0.0600	ug/L	120	(50-150)		
MS_200904290279	Phenanthrene	ND	2.0	2.02	ug/L	101	(70-130)		
LCS1	Propachlor		2.0	2.33	ug/L	117	(70-130)		
LCS2	Propachlor		2.0	2.26	ug/L	113	(70-130)	20	3.0
MBLK	Propachlor			<0.025	ug/L				
MRLMD	Propachlor		0.05	0.0350	ug/L	70	(50-150)		
MS_200904290279	Propachlor	ND	2.0	2.24	ug/L	112	(70-130)		
LCS1	Pyrene		2.0	2.22	ug/L	111	(70-130)		
LCS2	Pyrene		2.0	2.23	ug/L	112	(70-130)	20	0.45
MBLK	Pyrene			<0.025	ug/L				
MRLMD	Pyrene		0.05	0.0540	ug/L	108	(50-150)		
MS_200904290279	Pyrene	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Simazine		2.0	2.19	ug/L	110	(70-130)		
LCS2	Simazine		2.0	2.08	ug/L	104	(70-130)	20	5.2
MBLK	Simazine			<0.025	ug/L				
MRLMD	Simazine		0.05	0.0480	ug/L	96	(50-150)		
MS_200904290279	Simazine	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Terbacil		2.0	2.09	ug/L	105	(70-130)		
LCS2	Terbacil		2.0	2.04	ug/L	102	(70-130)	20	2.4
MBLK	Terbacil			<0.05	ug/L				
MS_200904290279	Terbacil	ND	2.0	2.03	ug/L	101	(70-130)		
LCS1	Terbuthylazine		2.0	2.35	ug/L	118	(70-130)		
LCS2	Terbuthylazine		2.0	2.36	ug/L	118	(70-130)	20	0.43
MBLK	Terbuthylazine			<0.2	ug/L				
MS_200904290279	Terbuthylazine	ND	2.0	2.24	ug/L	112	(70-130)		
LCS1	Thiobencarb		2.0	2.25	ug/L	112	(70-130)		
LCS2	Thiobencarb		2.0	2.25	ug/L	112	(70-130)	20	0.0
MBLK	Thiobencarb			<0.1	ug/L				
MS_200904290279	Thiobencarb	ND	2.0	2.16	ug/L	108	(70-130)		
LCS1	trans-Nonachlor		2.0	2.12	ug/L	106	(70-130)		
LCS2	trans-Nonachlor		2.0	2.16	ug/L	108	(70-130)	20	1.9
MBLK	trans-Nonachlor			<0.025	ug/L				
MRLMD	trans-Nonachlor		0.05	0.0470	ug/L	94	(50-150)		
MS_200904290279	trans-Nonachlor	ND	2.0	2.07	ug/L	104	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Trifluralin		2.0	2.14	ug/L	107	(70-130)		
LCS2	Trifluralin		2.0	2.15	ug/L	107	(70-130)	20	0.47
MBLK	Trifluralin			<0.05	ug/L				
MS_200904290279	Trifluralin	ND	2.0	2.09	ug/L	104	(70-130)		
LCS1	Triphenylphosphate (S)				%	107	(70-130)		
LCS2	Triphenylphosphate (S)				%	107	(70-130)		
MBLK	Triphenylphosphate (S)				%	104	(70-130)		
MRLMD	Triphenylphosphate (S)				%	99	(70-130)		
MS_200904290279	Triphenylphosphate (S)				%	108	(70-130)		

QC Ref# 510290 - NTA and EDTA by Ion Chromatography by MWH_MET — Analysis Date: 05/12/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	EDTA		0.5	0.524	mg/L	105	(80-120)		
LCS2	EDTA		0.5	0.507	mg/L	101	(80-120)	20	3.3
MBLK	EDTA			<0.1	mg/L				
MRL_CHK	EDTA		0.1	0.0972	mg/L	97	(50-150)		
MS_200905280015	EDTA	ND	0.5	0.471	mg/L	94	(80-120)		
MSD_200905280015	EDTA	ND	0.5	0.484	mg/L	97	(80-120)	20	2.8
LCS1	NTA		0.2	0.221	mg/L	111	(80-120)		
LCS2	NTA		0.2	0.228	mg/L	114	(80-120)	20	3.1
MBLK	NTA			<0.1	mg/L				
MRL_CHK	NTA		0.1	0.126	mg/L	126	(50-150)		
MS_200905280015	NTA	ND	0.2	0.220	mg/L	110	(80-120)		
MSD_200905280015	NTA	ND	0.2	0.210	mg/L	105	(80-120)	20	4.7

QC Ref# 510377 - Nitrosamines by GCMS by EPA 521 — Analysis Date: 05/07/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
CCCH	N-Nitroso dimethylamine (NDMA)		100	86.1	ng/l	86	(70-130)		
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	2.21	ng/l	111	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	40.8	ng/l	102	(70-130)		
CCCH	NDMA-D6 (S)				%	97	(70-130)		
CCCL	NDMA-D6 (S)				%	92	(70-130)		
CCCM	NDMA-D6 (S)				%	103	(70-130)		

QC Ref# 511120 - Nitrosamines by GCMS by EPA 521 — Analysis Date: 05/15/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	1.81	ng/l	90	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	36.8	ng/l	92	(70-130)		
CCCL	N-Nitrosodi-n-propylamin(NDPA)		2.0	2.34	ng/l	117	(50-150)		
CCCM	N-Nitrosodi-n-propylamin(NDPA)		40	36.4	ng/l	91	(70-130)		
CCCL	N-Nitrosodibutylamine (NDBA)		2.0	2.11	ng/l	106	(50-150)		
CCCM	N-Nitrosodibutylamine (NDBA)		40	42.4	ng/l	106	(70-130)		
CCCL	N-Nitrosodiethylamine (NDEA)		2.0	1.95	ng/l	98	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
CCCM	N-Nitrosodiethylamine (NDEA)		40	44.3	ng/l	111	(70-130)		
CCCL	N-Nitrosomethylethylamin(NMEA)		2.0	2.02	ng/l	101	(50-150)		
CCCM	N-Nitrosomethylethylamin(NMEA)		40	39.8	ng/l	100	(70-130)		
CCCL	N-Nitrosopyrollidine (NPYR)		2.0	2.04	ng/l	102	(50-150)		
CCCM	N-Nitrosopyrollidine (NPYR)		40	38.6	ng/l	97	(70-130)		
CCCL	NDMA-D6 (S)				%	90	(70-130)		
CCCM	NDMA-D6 (S)				%	105	(70-130)		

QC Ref# 511178 - Nitrosamines by GCMS by EPA 521 **Analysis Date: 05/14/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	N-Nitroso dimethylamine (NDMA)		40	40.0	ng/l	100	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/l				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	2.2	ng/l	110	(50-150)		
MS1_200905180107	N-Nitroso dimethylamine (NDMA)	2.4	2.0	4.4	ng/l	101	(50-150)		
MSD1_200905180107	N-Nitroso dimethylamine (NDMA)	2.4	2.0	4.46	ng/l	104	(50-150)	20	1.3
LCS1	N-Nitrosodi-n-propylamin(NDPA)		40	28.9	ng/l	72	(70-130)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/l				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2.0	1.54	ng/l	77	(50-150)		
MS1_200905180107	N-Nitrosodi-n-propylamin(NDPA)	ND	2.0	1.54	ng/l	77	(50-150)		
MSD1_200905180107	N-Nitrosodi-n-propylamin(NDPA)	ND	2.0	1.31	ng/l	65	(50-150)	20	16
LCS1	N-Nitrosodibutylamine (NDBA)		40	42.9	ng/l	107	(70-130)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/l				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2.0	3.08	ng/l	**154**	(50-150)		
MS1_200905180107	N-Nitrosodibutylamine (NDBA)	ND	2.0	3.36	ng/l	113	(50-150)		
MSD1_200905180107	N-Nitrosodibutylamine (NDBA)	ND	2.0	3.36	ng/l	113	(50-150)	20	0.12
LCS1	N-Nitrosodiethylamine (NDEA)		40	40.3	ng/l	101	(70-130)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/l				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2.0	2.6	ng/l	130	(50-150)		
MS1_200905180107	N-Nitrosodiethylamine (NDEA)	ND	2.0	2.68	ng/l	71	(50-150)		
MSD1_200905180107	N-Nitrosodiethylamine (NDEA)	ND	2.0	2.68	ng/l	71	(50-150)	20	0.15
LCS1	N-Nitrosomethylethylamin(NMEA)		40	40.0	ng/l	100	(70-130)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/l				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2.0	1.76	ng/l	88	(50-150)		
MS1_200905180107	N-Nitrosomethylethylamin(NMEA)	ND	2.0	2.91	ng/l	78	(50-150)		
MSD1_200905180107	N-Nitrosomethylethylamin(NMEA)	ND	2.0	2.91	ng/l	78	(50-150)	20	0.14
LCS1	N-Nitrosopyrollidine (NPYR)		40	40.4	ng/l	101	(70-130)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/l				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2.0	2.33	ng/l	117	(50-150)		
MS1_200905180107	N-Nitrosopyrollidine (NPYR)	ND	2.0	2.26	ng/l	113	(50-150)		
MSD1_200905180107	N-Nitrosopyrollidine (NPYR)	ND	2.0	2.26	ng/l	113	(50-150)	20	0.13
LCS1	NDMA-D6 (S)				%	99	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	NDMA-D6 (S)				%	77	(70-130)		
MRL_CHK	NDMA-D6 (S)				%	86	(70-130)		
MS1_200905180107	NDMA-D6 (S)				%	98	(70-130)		
MSD1_200905180107	NDMA-D6 (S)				%	98	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

05/04/2009

Henry Barrientos
Groundwater Management Unit
Water Supply Management Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Henry Barrientos,

This transmits the analytical results for the Laboratory services that you requested. The data contained herein are supported by the Laboratory Services Unit's Quality Assurance/Quality Control Program.

The analytical results, quality control information, and sample handling observations have been reviewed for both completeness and accuracy, with any exceptions noted.

Laboratory Analyst(s)

James N. Scott
Laboratory Manager

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

Lab No. 200904290981

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E08D012**	**Groundwater**	**910410150000**	**04/28/2009**	**0:00**	**Thomas M.**

Batch: 56390

Prep Date: Analysis Date: 04/29/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.23	mg/L		

Lab No. 200904290982

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E08D011**	**Groundwater**	**910410150000**	**04/28/2009**	**0:00**	**Thomas M.**

Batch: 56390

Prep Date: Analysis Date: 04/29/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.15	mg/L		

Lab No. 200904290983

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E07A014**	**Groundwater**	**910410150000**	**04/28/2009**	**0:00**	**Thomas M.**

Batch: 56390

Prep Date: Analysis Date: 04/29/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.25	mg/L		

Lab No. 200904290984

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E07A015**	**Groundwater**	**910410150000**	**04/28/2009**	**0:00**	**Thomas M.**

Batch: 56390

Prep Date: Analysis Date: 04/29/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.20	mg/L		

Lab No. 200904290985

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**L5-COMP**	**Groundwater**	**910410150000**	**04/28/2009**	**0:00**	**Thomas M.**

Batch: 56390

Prep Date: Analysis Date: 04/29/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.26	mg/L		

Lab No. 200904290986

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**L10-COMP**	**Groundwater**	**910410150000**	**04/28/2009**	**0:00**	**Thomas M.**

Batch: 56390

Prep Date: Analysis Date: 04/29/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.24	mg/L		

Lab No. 200904290987

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**SOURCE**	**Groundwater**	**910410150000**	**04/28/2009**	**0:00**	**Thomas M.**

Batch: 56390

Prep Date: Analysis Date: 04/29/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	Result	Units	Data Qualifier	DLR
Bromide	0.27	mg/L		

Legend:

DLR = Detection Limit For Reporting
ND = Not Detected At Or Above The DLR
NT = Not Tested
NR = Not Reported

ABS = Centimeters $^{-1}$
Cells/ml = Cells Per Milliliter
CFU/100 ml = Colony Forming Units Per 100 Milliliters
CFU/ml = Colony Forming Units Per Milliliter
cysts/L = Cysts Per Liter
Deg. C = Degrees Centigrade
mg/L = Milligrams Per Liter
MPN/100ml = Most Probable Number Per 100 Milliliters
ng/L = Nanograms Per Liter

NTU = Nephelometric Turbidity Units
oocysts/L = Oocysts Per Liter
P/A 100ml = Presence/Absence Per 100 Milliliters
pCi/L = Picocuries Per Liter
Rhod-Eqiv = Rhodamine Equivalents
T.O.N. = Threshold Odor Number
ug C/L = Micrograms Carbon Per Liter
ug/L = Micrograms Per Liter
umhos= Microhms

Data Qualifier Definitions:

A = Results may be biased high.
B = Results may be biased low.
D = Analyte is present in method blank.

E = Analyte confirmation on secondary column.
G = Sample hold time exceeded.
H = Presence verified but not quantified.
I = Sample unpreserved or improperly preserved.

J = Estimated result; value may not be accurate.
K = Too numerous to count; value represents filtration volume.
L = Matrix interference(s).
M = Field blanks not prepared at customer's request.

Batch: 56390

QC Code	Test Name		Reported Value	Units	Flag		Acceptance Range	RPD	Flag	RPD Limit
LFB	Bromide	Spike Amount: 1	1.01	mg/L		%Rec: 101	90 - 110			
LFM	Bromide	Spike Amount: 1	1.30	mg/L		%Rec: 107	90 - 110			
LFM	Bromide	Spike Amount: 1	1.21	mg/L		%Rec: 98	90 - 110			
LFM D	Bromide	Spike Amount: 1	1.20	mg/L		%Rec: 97	90 - 110	8		15
LFM D	Bromide	Spike Amount: 1	1.27	mg/L		%Rec: 104	90 - 110	4.8		15
LFB	Nitrate	Spike Amount: 2	2.0	mg/L		%Rec: 98	90 - 110			
LFM	Nitrate	Spike Amount: 1	3.4	mg/L		%Rec: 104	90 - 110			
LFM D	Nitrate	Spike Amount: 1	3.3	mg/L		%Rec: 95	90 - 110	2.7		15
LFB	Phosphate	Spike Amount: 1	1.03	mg/L		%Rec: 103	90 - 110			
LFM	Phosphate	Spike Amount: 1	1.28	mg/L		%Rec: 107	90 - 110			
LFM D	Phosphate	Spike Amount: 1	1.20	mg/L		%Rec: 99	90 - 110	6.5		15
LFB	Sulfate	Spike Amount: 40	41.3	mg/L		%Rec: 103.3	90 - 110			
LFM	Sulfate	Spike Amount: 20	67.8	mg/L		%Rec: 99.5	90 - 110			
LFM D	Sulfate	Spike Amount: 20	66.3	mg/L		%Rec: 92	90 - 110	2.2		15

Report Notes:

QCS, spike recovery, and RPD values that are outside of established limits are underlined.

If an LFM recovery exceeds the established limits for any analyte, and the laboratory performance for other QC parameters is shown to be in control for that analyte, then failure is not system related but due to matrix interferences and is labeled as suspect.

Reported values that are flagged "H" are above the established acceptance range; reported values that are flagged "L" are below the acceptance range. RPD results flagge "H" are above the established RPD limit.-

Quality control sample (LFB, LFM, LFM D, QCS, QCS R, and Surrogate) reporting frequency is based on the method requirement (e.g., a QCS may not be run with every batch).

Legend:

LFB = Laboratory Fortified Blank: An aliquot of a Laboratroty Reagent Blank (LRB) to which known quantities of the method analytes are added in the laboratory. The LFB is analyzed exactly like a sample.

LFB D = Laboratory Fortified Blank Duplicate: A duplicate aliquot of an LRB to which known quantities of the method analytes are added in the laboratory. The LFB D is analyzed exactly like a sample.

LFM = Laboratory Fortified Matrix: An aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM is analyze exactly like a sample.

LFM D = Laboratory Fortified Matrix Duplicate: A duplicate aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory The LFM D is analyzed exactly like a sample.

QCS = Quality Control Sample: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS is obtained fron a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified concentration range.

QCS R = Quality Control Sample Recovery: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS R is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified recovery range.

RPD = Relative Percent Difference

SUR = Surrogate. An organic compound that is similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
06/15/2009
MWH LABORATORIES

01114CA

RCZ: Richard.C.Zimmer

Project Manager

Report#: 306666
Project:
RECYCLED-WATER-STUDY
Group: Chemistry
PO#: 30-12408

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 306666
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Richard.C.Zimmer
Phone: 626-386-1157
PO #: 30-12408

The following samples were received from you on **May 19, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Matrix	Sample Date
200905190389	L-5 Composite	Water	18-May-2009 0000
	@NDMA_SPE		

Test Description

@NDMA_SPE -- Nitrosamines by GCMS

2/7

Reported: 06/17/09

SCANNED

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

4°

306666 SERIAL NO. 14466

PROJECT NAME SCVWD Recycled Water Study
SAMPLERS T. MURPHY (PRINT)
T. Murphy (SIGN)
PROJECT NUMBER 27011-07-7000
RECORDER T. MURPHY (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B. Glass Liter]
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ______

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB MWH

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO₃	HCL	Thio	Field Filtered (check)	ANALYSIS REQUESTED: NDMA	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	5/18/09	COMP	L-5 COMP	—	—	—	B	A				1		X	1		✓				
2																					
3																					
4																					
5																					
6																					
7																					
8	3/7																				
9																					
10																					
11																					
12																					
13																					
14																					
15																					
16																					

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy		5/19	10:10

Container Sealed with Custody Seal: Yes ☐ No ☑

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COMMERCIAL COURIER	COOLER	NONE	Thomas Murphy	5/18/09	1500			

Send Lab Results to (Name): NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Laboratory
Hits Report: 306666

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
05/19/2009

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL

200905190389 **L-5 Composite**

SUMMARY OF POSITIVE DATA ONLY

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
05/19/2009

L-5 Composite (200905190389) **Sampled on 05/18/2009 0000**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
6/1/2009	06/05/2009 11:26	512972	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
6/1/2009	06/05/2009 11:26	512972	(EPA 521)	NDMA-D6	86	%		1

Rounding on totals after summation.
(c) - indicates calculated results

QC Ref # 512972 - Nitrosamines by GCMS **Analysis Date: 06/05/2009**

200905190389 L-5 Composite Analyzed by: KAM

Locus Technologies

QC Ref# 512972 - Nitrosamines by GCMS by EPA 521 **Analysis Date: 06/04/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
CCCH	N-Nitroso dimethylamine (NDMA)		100	88.0	ng/l	88	(70-130)		
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	1.92	ng/l	96	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	39.9	ng/l	100	(70-130)		
LCS2	N-Nitroso dimethylamine (NDMA)		80	76.9	ng/l	96	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/l				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	2.25	ng/l	113	(50-150)		
MS2_200906080017	N-Nitroso dimethylamine (NDMA)	ND	40	37.1	ng/l	93	(70-130)		
MSD2_200906080017	N-Nitroso dimethylamine (NDMA)	ND	40	38.2	ng/l	96	(70-130)	20	2.9
CCCH	NDMA-D6 (S)			100	%	100	(70-130)		
CCCL	NDMA-D6 (S)			91.0	%	91	(70-130)		
CCCM	NDMA-D6 (S)			111	%	111	(70-130)		
LCS2	NDMA-D6 (S)			95.0	%	95	(70-130)		
MBLK	NDMA-D6 (S)			96.0	%	96	(70-130)		
MRL_CHK	NDMA-D6 (S)			102	%	102	(70-130)		
MS2_200906080017	NDMA-D6 (S)			93.0	%	93	(70-130)		
MSD2_200906080017	NDMA-D6 (S)			97.0	%	97	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Sample Event 5
7/13/2009

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 213438
ANALYTICAL REPORT

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

Project : 27011-07-4200
Location : Recycled Water Study
Level : II

Sample ID	Lab ID
MW-1	213438-001
MW-2	213438-002
MW-3	213438-003
MW-4	213438-004
L5-COMP	213438-005
L10-COMP	213438-006
SOURCE	213438-007
4931	213438-008
4932	213438-009

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: ______________________________ Date: 07/29/2009
Project Manager

NELAP # 01107CA

CASE NARRATIVE

Laboratory number: **213438**
Client: **Locus Technologies**
Project: **27011-07-4200**
Location: **Recycled Water Study**
Request Date: **07/13/09**
Samples Received: **07/13/09**

This data package contains sample and QC results for nine water samples, requested for the above referenced project on 07/13/09. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
High surrogate recoveries were observed for 1,2-dichloroethane-d4 in the method blank/BS/BSD for batch 152957. No other analytical problems were encountered.

Metals (EPA 6010B):
Low recoveries were observed for magnesium in the MS/MSD of MW-1 (lab # 213438-001); the BS/BSD were within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Ion Chromatography (EPA 300.0):
No analytical problems were encountered.

Total Cyanide (SM4500CN-E):
No analytical problems were encountered.

Alkalinity (SM2320B):
No analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):
No analytical problems were encountered.

Total Phosphorous (SM4500P-E):
No analytical problems were encountered.

Total Organic Carbon (TOC) (SM5310C):
No analytical problems were encountered.

Dissolved Organic Carbon (DOC) (SM5310C):
High recoveries were observed for dissolved organic carbon in the MS/MSD of MW-1 (lab # 213438-001); the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Surfactants (MBAS) (SM5540C):
No analytical problems were encountered.

CASE NARRATIVE

Laboratory number:	**213438**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**07/13/09**
Samples Received:	**07/13/09**

EPA 552 (EPA 552):
Weck Laboratories, Inc. in Hacienda Heights, CA performed the analysis. Please see the Weck Laboratories, Inc. case narrative.

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14488

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)

SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A] 40-ml VOA Vial
[✓ B] Glass Liter
[✓ C] Plastic 500-ml
[✓ D] Plastic Liter
[✓ E] ~~Brass Tube~~ 250 Poly
[✓ F] Other 500ml Glass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 213438

					AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED													LABORATORY USE ONLY		
	NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See Note 1	See Note 2	TOC DOC	TDS	8010/8020	HAA6 full list	total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1	7-13-08	850	MW-1	18.9	911	6.45	D	A	1					X									1		✓				
	2							C	A		1					X								1		✓				
	3							F	A				1				X							1		✓				
	4							E	A	1								X						1		✓				
	5							A	A			3							X					1		✓	✓			
	6							B	A	1										X				1		✓				
	7							E	A				1								X			1		✓				
2	8		1000	MW-2	17.1	752	6.79	D	A	1					X									1		✓				
	9							C	A		1					X								1		✓				
	10							F	A				1				X							1		✓				
	11							E	A	1								X						1		✓				
	12							A	A			3							X					1		✓	✓			
	13							B	A	1										X				1		✓				
	14							E	A				1								X			1		✓				
	15																													
	16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-89, 90, 91, 93		7/13/09	1400		7/13/09	1400

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ OTHER ______ TEL ______ FAX ______

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14489

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER Hgleaf (SIGN)
SAMPLERS Henry Costano Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
[✓ A.] 40-ml VOA Vial	[✓ A.] Ground Water	[✓ 1.] Standard
[✓ B.] Glass Liter	B. Surface Water	2. 48 Hour
[✓ C.] Plastic 500-ml	C. Leachate	3. 24 Hour
[✓ D.] Plastic Liter	D. Rinseate	4. Other
[✓ E.] ~~Brass Tube~~ 250 Poly	E. Soil/Sediment	
[✓ F.] Other 500 ml glass	F. Oil	
	G. Waste	
	H. Blank/Spike	
	I. Other	

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 213438

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HN0₃	HCL	H2SO4	Field Filtered (check)	ANALYSIS REQUESTED See Note 1	See Note 2	TOC/DOC	TDS	8010/8020	HAA6	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
3	1	7-13-09	1240	MW-3	16.1	979	6.48	D	A	1					X									1		✓				
	2							C	A		1					X								1		✓				
	3							F	A				1				X							1		✓				
	4							E	A	1								X						1		✓				
	5							A	A			3							X					1		✓	✓			
	6							B	A	1										X				1		✓				
	7		↓	↓	↓	↓	↓	E	A				1								X			1		✓				
4	8		1125	MW-4	15.4	901	6.74	D	A	1					X									1		✓				
	9							C	A		1					X								1		✓				
	10							F	A				1				X							1		✓				
	11							E	A	1								X						1		✓				
	12							A	A			3							X					1		✓	✓			
	13							B	A	1										X				1		✓				
	14	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
	15																													
	16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Hgleaf			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-88, 90, 91, 93		7/13/09	1400		7/13/09	1400

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ OTHER TEL FAX

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14490

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)

SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
(A) 40-ml VOA Vial
B. Glass Liter
(C) Plastic 500-ml
~~D. Plastic Liter~~ Glass ~~500ml Amber~~
(E) ~~Brass Tube~~ 250 Amber Glass
(F) Other 250 Poly

SAMPLE DESCRIPTION CODES
(A) Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
(1) Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 213438

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See Note 1	See Note 2	TOC	DOC	TDS	D010/5020	HAA6	Total Phosphate	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
5	1	7-13-09	comp	L5-COMP	22.5	2141	7.24	C	A	1					X								1		✓				
	2							F	A		1					X							1		✓				
	3							E	A				1				X						1		✓				
	4							E	A				1					X					1		✓				
	5							F	A	1									X				1		✓				
	6							A	A			2								X			1		✓	✓			
	7							E	A	1											X		1		✓				
	8			↓	↓	↓	↓	F	A				1									X	1		✓				
6	9			L10-COMP	23.4	1543	7.55	C	A	1					X								1		✓				
	10							F	A		1					X							1		✓				
	11							E	A				1				X						1		✓				
	12							E	A				1					X					1		✓				
	13							F	A	1									X				1		✓				
	14							A	A			2								X			1		✓	✓			
	15							E	A	1											X		1		✓				
	16	↓	↓	↓	↓	↓	↓	F	A				1									X	1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-88,89,91,93		7/13/09	1400		7/13/09	1400

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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☐ OTHER ______ TEL ______ FAX ______

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REV. 6/02

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14491

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A] 40-ml VOA Vial
[✓ B] Glass Liter
[✓ C] Plastic 500-ml
[✓ D] Plastic Liter
[✓ E] ~~Brass Tube~~ 250 Poly
[✓ F] Other ~~250~~ 500 ml glass

SAMPLE DESCRIPTION CODES
[✓ A] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 213438

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED															
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	~~Field Filtered (check)~~ NaOH	See Note 1	See Note 2	TOC DOC	TDS	8010/8020	HAA6	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
7 1	7-13-09	930	SOURCE	25.0	1160	7.07	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8	↓	↓	↓	↓	↓	↓	D	A	1												X		1		✓				
9	↓	↓	↓	↓	↓	↓	C	A					1									X	1		✓				
10	↓	—	Temp Blank	—	—	—	A	H	1															*	✓	N/A	*		
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride. *Temp to be measured & rec. upon reciept of samples at lab
2. Boron, Calcium, Magnesium, Sodium, Potassium.
3.3 C° 7/13/09 1630 PM

Field / Container Temp. 4?

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-88, 89, 90, 93	Thomas Murphy	7/13/09	1400		7/13/09	1400

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14493

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLERS Henry Castoria (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A]. 40-ml VOA Vial
[✓ B]. Glass Liter
[✓ C]. Plastic 500-ml
[✓ D]. Plastic Liter
[✓ E]. ~~Brass Tube~~ 250 Poly
[✓ F]. Other 500ml glass

SAMPLE DESCRIPTION CODES
[✓ A]. Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H]. Blank/Spike
I. Other ________

TAT CODES
[✓ 1]. Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 213438

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO$_3$	HCL	H2SO4	Field Filtered (check)	See Note 1	See Note 2	TOC DOC	TDS	8010/8020	HAA6 full list	Total Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
8	1	7-13-09	—	4931	—	—	—	D	A	1					X								1		✓				
	2							C	H		1					X							1		✓				
	3							F	H				1				X						1		✓				
	4							E	H	1								X					1		✓				
	5							A	H			3							X				1		✓	✓			
	6							B	H	1										X			1		✓				
	7							E	H				1								X		1		✓				
9	8		—	4932	—	—	—	D	A	1					X								1		✓				
	9							C	A		1					X							1		✓				
	10							F	A				1				X						1		✓				
	11							E	A	1								X					1		✓				
	12							A	A			3							X				1		✓	✓			
	13							B	A	1										X			1		✓				
	14							E	A				1								X		1		✓				
	15																												
	16																												

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.

2. Boron, Calcium, Magnesium, Sodium, Potasium.

Container Sealed with Custody Seal: Yes ☑ No ☐

Field / Container Temp.

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	144-89,90,91,~~98~~,88		7/13/09	1400		7/13/09	1400

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______________________ TEL __________ FAX __________

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 213438 Date Received 7/13/09 Number of coolers 3
Client LOCUS Project RECYCLED WATER STUDY

Date Opened 7/13/09 By (print) M VILLANUEVA (sign)
Date Logged in ✓ By (print) ✓ (sign) ✓

1. Did cooler come with a shipping slip (airbill, etc) YES [✓ NO]
Shipping info

2A. Were custody seals present? ... ☒ YES (circle) [✓ on cooler] on samples ☐ NO
How many 3 Name TOM MURPHY Date 7/13/09
2B. Were custody seals intact upon arrival? [✓ YES] NO N/A
3. Were custody papers dry and intact when received? [✓ YES] NO
4. Were custody papers filled out properly (ink, signed, etc)? [✓ YES] NO
5. Is the project identifiable from custody papers? (If so fill out top of form) [✓ YES] NO
6. Indicate the packing in cooler: (if other, describe)

☒ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 3.3 7/13/09 1630 MV

☐ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES [✓ NO]
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? [✓ YES] NO
10. Are samples in the appropriate containers for indicated tests? [✓ YES] NO
11. Are sample labels present, in good condition and complete? [✓ YES] NO
12. Do the sample labels agree with custody papers? [✓ YES] NO
13. Was sufficient amount of sample sent for tests requested? [✓ YES] NO
14. Are the samples appropriately preserved? [✓ YES] NO N/A
15. Are bubbles > 6mm absent in VOA samples? YES [✓ NO] N/A
16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS
SAMPLE # 5 2 VOA'S w/ BUBBLE
SAMPLE # 7 2/3 VOA'S w/ BUBBLE

SAMPLE # 5 & 6 LIMITED SAMPLES

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1

Rev. 6 Number 1 of 3
Effective: 23 July 2008
Z:\qc\forms\checklists\Cooler Receipt Checklist_rv6.doc

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Diln Fac:	1.000
Lab ID:	213438-001	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Chloromethane	ND	1.0	152917	07/16/09
Vinyl Chloride	ND	0.5	152917	07/16/09
Bromomethane	ND	1.0	152917	07/16/09
Chloroethane	ND	1.0	152917	07/16/09
Trichlorofluoromethane	ND	1.0	152917	07/16/09
Freon 113	ND	5.0	152917	07/16/09
1,1-Dichloroethene	ND	0.5	152917	07/16/09
Methylene Chloride	ND	5.0	152917	07/16/09
trans-1,2-Dichloroethene	ND	0.5	152917	07/16/09
1,1-Dichloroethane	ND	0.5	152917	07/16/09
cis-1,2-Dichloroethene	ND	0.5	152917	07/16/09
Chloroform	ND	0.5	152917	07/16/09
1,1,1-Trichloroethane	ND	0.5	152917	07/16/09
Carbon Tetrachloride	ND	0.5	152917	07/16/09
1,2-Dichloroethane	ND	0.5	152917	07/16/09
Trichloroethene	ND	0.5	152917	07/16/09
1,2-Dichloropropane	ND	0.5	152917	07/16/09
Bromodichloromethane	ND	0.5	152917	07/16/09
2-Chloroethylvinylether	ND	1.0	152957	07/17/09
cis-1,3-Dichloropropene	ND	0.5	152917	07/16/09
trans-1,3-Dichloropropene	ND	0.5	152917	07/16/09
1,1,2-Trichloroethane	ND	0.5	152917	07/16/09
Tetrachloroethene	ND	0.5	152917	07/16/09
Dibromochloromethane	ND	0.5	152917	07/16/09
Chlorobenzene	ND	0.5	152917	07/16/09
Bromoform	ND	0.5	152917	07/16/09
1,1,2,2-Tetrachloroethane	ND	0.5	152917	07/16/09
1,3-Dichlorobenzene	ND	0.5	152917	07/16/09
1,4-Dichlorobenzene	ND	0.5	152917	07/16/09
1,2-Dichlorobenzene	ND	0.5	152917	07/16/09

Surrogate	%REC	Limits	Batch#	Analyzed
1,2-Dichloroethane-d4	108	80-120	152917	07/16/09
Toluene-d8	96	80-120	152917	07/16/09
Bromofluorobenzene	108	80-120	152917	07/16/09

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	152917
Lab ID:	213438-001	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	108	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Diln Fac:	1.000
Lab ID:	213438-002	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Chloromethane	ND	1.0	152917	07/16/09
Vinyl Chloride	ND	0.5	152917	07/16/09
Bromomethane	ND	1.0	152917	07/16/09
Chloroethane	ND	1.0	152917	07/16/09
Trichlorofluoromethane	ND	1.0	152917	07/16/09
Freon 113	ND	5.0	152917	07/16/09
1,1-Dichloroethene	ND	0.5	152917	07/16/09
Methylene Chloride	ND	5.0	152917	07/16/09
trans-1,2-Dichloroethene	ND	0.5	152917	07/16/09
1,1-Dichloroethane	ND	0.5	152917	07/16/09
cis-1,2-Dichloroethene	ND	0.5	152917	07/16/09
Chloroform	ND	0.5	152917	07/16/09
1,1,1-Trichloroethane	ND	0.5	152917	07/16/09
Carbon Tetrachloride	ND	0.5	152917	07/16/09
1,2-Dichloroethane	ND	0.5	152917	07/16/09
Trichloroethene	ND	0.5	152917	07/16/09
1,2-Dichloropropane	ND	0.5	152917	07/16/09
Bromodichloromethane	ND	0.5	152917	07/16/09
2-Chloroethylvinylether	ND	1.0	152957	07/17/09
cis-1,3-Dichloropropene	ND	0.5	152917	07/16/09
trans-1,3-Dichloropropene	ND	0.5	152917	07/16/09
1,1,2-Trichloroethane	ND	0.5	152917	07/16/09
Tetrachloroethene	ND	0.5	152917	07/16/09
Dibromochloromethane	ND	0.5	152917	07/16/09
Chlorobenzene	ND	0.5	152917	07/16/09
Bromoform	ND	0.5	152917	07/16/09
1,1,2,2-Tetrachloroethane	ND	0.5	152917	07/16/09
1,3-Dichlorobenzene	ND	0.5	152917	07/16/09
1,4-Dichlorobenzene	ND	0.5	152917	07/16/09
1,2-Dichlorobenzene	ND	0.5	152917	07/16/09

Surrogate	%REC	Limits	Batch#	Analyzed
1,2-Dichloroethane-d4	103	80-120	152917	07/16/09
Toluene-d8	98	80-120	152917	07/16/09
Bromofluorobenzene	108	80-120	152917	07/16/09

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	152917
Lab ID:	213438-002	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Analyte	**Result**	**RL**
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	108	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Diln Fac:	1.000
Lab ID:	213438-003	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Chloromethane	ND	1.0	152917	07/16/09
Vinyl Chloride	ND	0.5	152917	07/16/09
Bromomethane	ND	1.0	152917	07/16/09
Chloroethane	ND	1.0	152917	07/16/09
Trichlorofluoromethane	ND	1.0	152917	07/16/09
Freon 113	ND	5.0	152917	07/16/09
1,1-Dichloroethene	ND	0.5	152917	07/16/09
Methylene Chloride	ND	5.0	152917	07/16/09
trans-1,2-Dichloroethene	ND	0.5	152917	07/16/09
1,1-Dichloroethane	ND	0.5	152917	07/16/09
cis-1,2-Dichloroethene	ND	0.5	152917	07/16/09
Chloroform	ND	0.5	152917	07/16/09
1,1,1-Trichloroethane	ND	0.5	152917	07/16/09
Carbon Tetrachloride	ND	0.5	152917	07/16/09
1,2-Dichloroethane	ND	0.5	152917	07/16/09
Trichloroethene	ND	0.5	152917	07/16/09
1,2-Dichloropropane	ND	0.5	152917	07/16/09
Bromodichloromethane	ND	0.5	152917	07/16/09
2-Chloroethylvinylether	ND	1.0	152957	07/17/09
cis-1,3-Dichloropropene	ND	0.5	152917	07/16/09
trans-1,3-Dichloropropene	ND	0.5	152917	07/16/09
1,1,2-Trichloroethane	ND	0.5	152917	07/16/09
Tetrachloroethene	ND	0.5	152917	07/16/09
Dibromochloromethane	ND	0.5	152917	07/16/09
Chlorobenzene	ND	0.5	152917	07/16/09
Bromoform	ND	0.5	152917	07/16/09
1,1,2,2-Tetrachloroethane	ND	0.5	152917	07/16/09
1,3-Dichlorobenzene	ND	0.5	152917	07/16/09
1,4-Dichlorobenzene	ND	0.5	152917	07/16/09
1,2-Dichlorobenzene	ND	0.5	152917	07/16/09

Surrogate	%REC	Limits	Batch#	Analyzed
1,2-Dichloroethane-d4	104	80-120	152917	07/16/09
Toluene-d8	98	80-120	152917	07/16/09
Bromofluorobenzene	115	80-120	152917	07/16/09

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	152917
Lab ID:	213438-003	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	104	80-120
Toluene-d8	98	80-120
Bromofluorobenzene	115	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Diln Fac:	1.000
Lab ID:	213438-004	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Chloromethane	ND	1.0	152917	07/16/09
Vinyl Chloride	ND	0.5	152917	07/16/09
Bromomethane	ND	1.0	152917	07/16/09
Chloroethane	ND	1.0	152917	07/16/09
Trichlorofluoromethane	ND	1.0	152917	07/16/09
Freon 113	ND	5.0	152917	07/16/09
1,1-Dichloroethene	ND	0.5	152917	07/16/09
Methylene Chloride	ND	5.0	152917	07/16/09
trans-1,2-Dichloroethene	ND	0.5	152917	07/16/09
1,1-Dichloroethane	ND	0.5	152917	07/16/09
cis-1,2-Dichloroethene	ND	0.5	152917	07/16/09
Chloroform	ND	0.5	152917	07/16/09
1,1,1-Trichloroethane	ND	0.5	152917	07/16/09
Carbon Tetrachloride	ND	0.5	152917	07/16/09
1,2-Dichloroethane	ND	0.5	152917	07/16/09
Trichloroethene	ND	0.5	152917	07/16/09
1,2-Dichloropropane	ND	0.5	152917	07/16/09
Bromodichloromethane	ND	0.5	152917	07/16/09
2-Chloroethylvinylether	ND	1.0	152957	07/17/09
cis-1,3-Dichloropropene	ND	0.5	152917	07/16/09
trans-1,3-Dichloropropene	ND	0.5	152917	07/16/09
1,1,2-Trichloroethane	ND	0.5	152917	07/16/09
Tetrachloroethene	ND	0.5	152917	07/16/09
Dibromochloromethane	ND	0.5	152917	07/16/09
Chlorobenzene	ND	0.5	152917	07/16/09
Bromoform	ND	0.5	152917	07/16/09
1,1,2,2-Tetrachloroethane	ND	0.5	152917	07/16/09
1,3-Dichlorobenzene	ND	0.5	152917	07/16/09
1,4-Dichlorobenzene	ND	0.5	152917	07/16/09
1,2-Dichlorobenzene	ND	0.5	152917	07/16/09

Surrogate	%REC	Limits	Batch#	Analyzed
1,2-Dichloroethane-d4	103	80-120	152917	07/16/09
Toluene-d8	95	80-120	152917	07/16/09
Bromofluorobenzene	113	80-120	152917	07/16/09

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	152917
Lab ID:	213438-004	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	113	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L5-COMP	Diln Fac:	1.000
Lab ID:	213438-005	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Chloromethane	ND	1.0	152917	07/16/09
Vinyl Chloride	ND	0.5	152917	07/16/09
Bromomethane	ND	1.0	152917	07/16/09
Chloroethane	ND	1.0	152917	07/16/09
Trichlorofluoromethane	ND	1.0	152917	07/16/09
Freon 113	ND	5.0	152917	07/16/09
1,1-Dichloroethene	ND	0.5	152917	07/16/09
Methylene Chloride	ND	5.0	152917	07/16/09
trans-1,2-Dichloroethene	ND	0.5	152917	07/16/09
1,1-Dichloroethane	ND	0.5	152917	07/16/09
cis-1,2-Dichloroethene	ND	0.5	152917	07/16/09
Chloroform	ND	0.5	152917	07/16/09
1,1,1-Trichloroethane	ND	0.5	152917	07/16/09
Carbon Tetrachloride	ND	0.5	152917	07/16/09
1,2-Dichloroethane	ND	0.5	152917	07/16/09
Trichloroethene	ND	0.5	152917	07/16/09
1,2-Dichloropropane	ND	0.5	152917	07/16/09
Bromodichloromethane	ND	0.5	152917	07/16/09
2-Chloroethylvinylether	ND	1.0	152957	07/17/09
cis-1,3-Dichloropropene	ND	0.5	152917	07/16/09
trans-1,3-Dichloropropene	ND	0.5	152917	07/16/09
1,1,2-Trichloroethane	ND	0.5	152917	07/16/09
Tetrachloroethene	ND	0.5	152917	07/16/09
Dibromochloromethane	ND	0.5	152917	07/16/09
Chlorobenzene	ND	0.5	152917	07/16/09
Bromoform	ND	0.5	152917	07/16/09
1,1,2,2-Tetrachloroethane	ND	0.5	152917	07/16/09
1,3-Dichlorobenzene	ND	0.5	152917	07/16/09
1,4-Dichlorobenzene	ND	0.5	152917	07/16/09
1,2-Dichlorobenzene	ND	0.5	152917	07/16/09

Surrogate	%REC	Limits	Batch#	Analyzed
1,2-Dichloroethane-d4	105	80-120	152917	07/16/09
Toluene-d8	97	80-120	152917	07/16/09
Bromofluorobenzene	118	80-120	152917	07/16/09

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L5-COMP	Batch#:	152917
Lab ID:	213438-005	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	105	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	118	80-125

ND= Not Detected
RL= Reporting Limit

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Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L10-COMP	Diln Fac:	1.000
Lab ID:	213438-006	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Chloromethane	ND	1.0	152917	07/16/09
Vinyl Chloride	ND	0.5	152917	07/16/09
Bromomethane	ND	1.0	152917	07/16/09
Chloroethane	ND	1.0	152917	07/16/09
Trichlorofluoromethane	ND	1.0	152917	07/16/09
Freon 113	ND	5.0	152917	07/16/09
1,1-Dichloroethene	ND	0.5	152917	07/16/09
Methylene Chloride	ND	5.0	152917	07/16/09
trans-1,2-Dichloroethene	ND	0.5	152917	07/16/09
1,1-Dichloroethane	ND	0.5	152917	07/16/09
cis-1,2-Dichloroethene	ND	0.5	152917	07/16/09
Chloroform	ND	0.5	152917	07/16/09
1,1,1-Trichloroethane	ND	0.5	152917	07/16/09
Carbon Tetrachloride	ND	0.5	152917	07/16/09
1,2-Dichloroethane	ND	0.5	152917	07/16/09
Trichloroethene	ND	0.5	152917	07/16/09
1,2-Dichloropropane	ND	0.5	152917	07/16/09
Bromodichloromethane	ND	0.5	152917	07/16/09
2-Chloroethylvinylether	ND	1.0	152957	07/17/09
cis-1,3-Dichloropropene	ND	0.5	152917	07/16/09
trans-1,3-Dichloropropene	ND	0.5	152917	07/16/09
1,1,2-Trichloroethane	ND	0.5	152917	07/16/09
Tetrachloroethene	ND	0.5	152917	07/16/09
Dibromochloromethane	ND	0.5	152917	07/16/09
Chlorobenzene	ND	0.5	152917	07/16/09
Bromoform	ND	0.5	152917	07/16/09
1,1,2,2-Tetrachloroethane	ND	0.5	152917	07/16/09
1,3-Dichlorobenzene	ND	0.5	152917	07/16/09
1,4-Dichlorobenzene	ND	0.5	152917	07/16/09
1,2-Dichlorobenzene	ND	0.5	152917	07/16/09

Surrogate	%REC	Limits	Batch#	Analyzed
1,2-Dichloroethane-d4	103	80-120	152917	07/16/09
Toluene-d8	97	80-120	152917	07/16/09
Bromofluorobenzene	112	80-120	152917	07/16/09

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L10-COMP	Batch#:	152917
Lab ID:	213438-006	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	103	80-120
Toluene-d8	97	80-120
Bromofluorobenzene	112	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Diln Fac:	1.000
Lab ID:	213438-007	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Chloromethane	ND	1.0	152917	07/16/09
Vinyl Chloride	ND	0.5	152917	07/16/09
Bromomethane	ND	1.0	152917	07/16/09
Chloroethane	ND	1.0	152917	07/16/09
Trichlorofluoromethane	ND	1.0	152917	07/16/09
Freon 113	ND	5.0	152917	07/16/09
1,1-Dichloroethene	ND	0.5	152917	07/16/09
Methylene Chloride	ND	5.0	152917	07/16/09
trans-1,2-Dichloroethene	ND	0.5	152917	07/16/09
1,1-Dichloroethane	ND	0.5	152917	07/16/09
cis-1,2-Dichloroethene	ND	0.5	152917	07/16/09
Chloroform	16	0.5	152917	07/16/09
1,1,1-Trichloroethane	ND	0.5	152917	07/16/09
Carbon Tetrachloride	ND	0.5	152917	07/16/09
1,2-Dichloroethane	ND	0.5	152917	07/16/09
Trichloroethene	ND	0.5	152917	07/16/09
1,2-Dichloropropane	ND	0.5	152917	07/16/09
Bromodichloromethane	15	0.5	152917	07/16/09
2-Chloroethylvinylether	ND	1.0	152957	07/17/09
cis-1,3-Dichloropropene	ND	0.5	152917	07/16/09
trans-1,3-Dichloropropene	ND	0.5	152917	07/16/09
1,1,2-Trichloroethane	ND	0.5	152917	07/16/09
Tetrachloroethene	ND	0.5	152917	07/16/09
Dibromochloromethane	6.3	0.5	152917	07/16/09
Chlorobenzene	ND	0.5	152917	07/16/09
Bromoform	1.0	0.5	152917	07/16/09
1,1,2,2-Tetrachloroethane	ND	0.5	152917	07/16/09
1,3-Dichlorobenzene	ND	0.5	152917	07/16/09
1,4-Dichlorobenzene	ND	0.5	152917	07/16/09
1,2-Dichlorobenzene	ND	0.5	152917	07/16/09

Surrogate	%REC	Limits	Batch#	Analyzed
1,2-Dichloroethane-d4	108	80-120	152917	07/16/09
Toluene-d8	100	80-120	152917	07/16/09
Bromofluorobenzene	109	80-120	152917	07/16/09

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	152917
Lab ID:	213438-007	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	108	80-120
Toluene-d8	100	80-120
Bromofluorobenzene	109	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	4931	Diln Fac:	1.000
Lab ID:	213438-008	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Chloromethane	ND	1.0	152917	07/16/09
Vinyl Chloride	ND	0.5	152917	07/16/09
Bromomethane	ND	1.0	152917	07/16/09
Chloroethane	ND	1.0	152917	07/16/09
Trichlorofluoromethane	ND	1.0	152917	07/16/09
Freon 113	ND	5.0	152917	07/16/09
1,1-Dichloroethene	ND	0.5	152917	07/16/09
Methylene Chloride	ND	5.0	152917	07/16/09
trans-1,2-Dichloroethene	ND	0.5	152917	07/16/09
1,1-Dichloroethane	ND	0.5	152917	07/16/09
cis-1,2-Dichloroethene	ND	0.5	152917	07/16/09
Chloroform	ND	0.5	152917	07/16/09
1,1,1-Trichloroethane	ND	0.5	152917	07/16/09
Carbon Tetrachloride	ND	0.5	152917	07/16/09
1,2-Dichloroethane	ND	0.5	152917	07/16/09
Trichloroethene	ND	0.5	152917	07/16/09
1,2-Dichloropropane	ND	0.5	152917	07/16/09
Bromodichloromethane	ND	0.5	152917	07/16/09
2-Chloroethylvinylether	ND	1.0	152957	07/17/09
cis-1,3-Dichloropropene	ND	0.5	152917	07/16/09
trans-1,3-Dichloropropene	ND	0.5	152917	07/16/09
1,1,2-Trichloroethane	ND	0.5	152917	07/16/09
Tetrachloroethene	ND	0.5	152917	07/16/09
Dibromochloromethane	ND	0.5	152917	07/16/09
Chlorobenzene	ND	0.5	152917	07/16/09
Bromoform	ND	0.5	152917	07/16/09
1,1,2,2-Tetrachloroethane	ND	0.5	152917	07/16/09
1,3-Dichlorobenzene	ND	0.5	152917	07/16/09
1,4-Dichlorobenzene	ND	0.5	152917	07/16/09
1,2-Dichlorobenzene	ND	0.5	152917	07/16/09

Surrogate	%REC	Limits	Batch#	Analyzed
1,2-Dichloroethane-d4	105	80-120	152917	07/16/09
Toluene-d8	96	80-120	152917	07/16/09
Bromofluorobenzene	110	80-120	152917	07/16/09

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	4931	Batch#:	152917
Lab ID:	213438-008	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	105	80-120
Toluene-d8	96	80-120
Bromofluorobenzene	110	80-125

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	4932	Diln Fac:	1.000
Lab ID:	213438-009	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Chloromethane	ND	1.0	152917	07/16/09
Vinyl Chloride	ND	0.5	152917	07/16/09
Bromomethane	ND	1.0	152917	07/16/09
Chloroethane	ND	1.0	152917	07/16/09
Trichlorofluoromethane	ND	1.0	152917	07/16/09
Freon 113	ND	5.0	152917	07/16/09
1,1-Dichloroethene	ND	0.5	152917	07/16/09
Methylene Chloride	ND	5.0	152917	07/16/09
trans-1,2-Dichloroethene	ND	0.5	152917	07/16/09
1,1-Dichloroethane	ND	0.5	152917	07/16/09
cis-1,2-Dichloroethene	ND	0.5	152917	07/16/09
Chloroform	16	0.5	152917	07/16/09
1,1,1-Trichloroethane	ND	0.5	152917	07/16/09
Carbon Tetrachloride	ND	0.5	152917	07/16/09
1,2-Dichloroethane	ND	0.5	152917	07/16/09
Trichloroethene	ND	0.5	152917	07/16/09
1,2-Dichloropropane	ND	0.5	152917	07/16/09
Bromodichloromethane	14	0.5	152917	07/16/09
2-Chloroethylvinylether	ND	1.0	152957	07/17/09
cis-1,3-Dichloropropene	ND	0.5	152917	07/16/09
trans-1,3-Dichloropropene	ND	0.5	152917	07/16/09
1,1,2-Trichloroethane	ND	0.5	152917	07/16/09
Tetrachloroethene	ND	0.5	152917	07/16/09
Dibromochloromethane	6.1	0.5	152917	07/16/09
Chlorobenzene	ND	0.5	152917	07/16/09
Bromoform	1.0	0.5	152917	07/16/09
1,1,2,2-Tetrachloroethane	ND	0.5	152917	07/16/09
1,3-Dichlorobenzene	ND	0.5	152917	07/16/09
1,4-Dichlorobenzene	ND	0.5	152917	07/16/09
1,2-Dichlorobenzene	ND	0.5	152917	07/16/09

Surrogate	%REC	Limits	Batch#	Analyzed
1,2-Dichloroethane-d4	106	80-120	152917	07/16/09
Toluene-d8	94	80-120	152917	07/16/09
Bromofluorobenzene	108	80-120	152917	07/16/09

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	4932	Batch#:	152917
Lab ID:	213438-009	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	106	80-120
Toluene-d8	94	80-120
Bromofluorobenzene	108	80-125

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	152917
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Type: BS Lab ID: QC503676

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	15.00	14.43	96	80-120
Trichloroethene	15.00	14.45	96	80-120
Chlorobenzene	15.00	15.32	102	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	93	80-120
Toluene-d8	91	80-120
Bromofluorobenzene	97	80-120

Type: BSD Lab ID: QC503677

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	15.00	14.15	94	80-120	2	35
Trichloroethene	15.00	14.26	95	80-120	1	35
Chlorobenzene	15.00	14.47	96	80-120	6	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-120
Toluene-d8	94	80-120
Bromofluorobenzene	98	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	152917
Units:	ug/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Type: BS Lab ID: QC503676

Analyte	Spiked	Result	%REC	Limits
Benzene	15.00	13.45	90	80-120
Toluene	15.00	14.46	96	80-120
Chlorobenzene	15.00	15.32	102	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	93	80-120
Toluene-d8	91	80-120
Bromofluorobenzene	97	80-125

Type: BSD Lab ID: QC503677

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Benzene	15.00	13.87	92	80-120	3	35
Toluene	15.00	14.23	95	80-120	2	35
Chlorobenzene	15.00	14.47	96	80-120	6	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	99	80-120
Toluene-d8	94	80-120
Bromofluorobenzene	98	80-125

RPD= Relative Percent Difference

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC503678	Batch#:	152917
Matrix:	Water	Analyzed:	07/16/09
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	NA	
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	105	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	107	80-120

NA= Not Analyzed
ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC503678	Batch#:	152917
Matrix:	Water	Analyzed:	07/16/09
Units:	ug/L		

Analyte	Result	RL
Benzene	ND	0.5
Toluene	ND	0.5
Chlorobenzene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	105	80-120
Toluene-d8	95	80-120
Bromofluorobenzene	107	80-125

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC503830	Batch#:	152957
Matrix:	Water	Analyzed:	07/17/09
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	5.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	5.0
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
2-Chloroethylvinylether	ND	1.0
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	124 *	80-120
Toluene-d8	99	80-120
Bromofluorobenzene	105	80-120

*= Value outside of QC limits; see narrative
ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	152957
Units:	ug/L	Analyzed:	07/17/09
Diln Fac:	1.000		

Type: BS

Lab ID: QC503831

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	19.28	96	80-120
Trichloroethene	20.00	22.15	111	80-120
Chlorobenzene	20.00	19.56	98	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	129 *	80-120
Toluene-d8	102	80-120
Bromofluorobenzene	104	80-120

Type: BSD

Lab ID: QC503832

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	20.00	20.00	100	80-120	4	35
Trichloroethene	20.00	22.23	111	80-120	0	35
Chlorobenzene	20.00	19.98	100	80-120	2	35

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	125 *	80-120
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-120

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Boron

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Prepared:	07/14/09
Diln Fac:	1.000	Analyzed:	07/15/09
Batch#:	152878		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	213438-001	190	100
MW-2	SAMPLE	213438-002	140	100
MW-3	SAMPLE	213438-003	190	100
MW-4	SAMPLE	213438-004	200	100
L5-COMP	SAMPLE	213438-005	320	100
L10-COMP	SAMPLE	213438-006	230	100
SOURCE	SAMPLE	213438-007	420	100
4931	SAMPLE	213438-008	ND	100
4932	SAMPLE	213438-009	420	100
	BLANK	QC503493	ND	100

ND= Not Detected
RL= Reporting Limit

Calcium

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Prepared:	07/14/09
Batch#:	152878		

Field ID	Type	Lab ID	Result	RL	Diln Fac	Analyzed
MW-1	SAMPLE	213438-001	83,000	500	1.000	07/15/09
MW-2	SAMPLE	213438-002	58,000	500	1.000	07/15/09
MW-3	SAMPLE	213438-003	90,000	500	1.000	07/15/09
MW-4	SAMPLE	213438-004	110,000	2,600	10.00	07/16/09
L5-COMP	SAMPLE	213438-005	180,000	2,600	10.00	07/16/09
L10-COMP	SAMPLE	213438-006	130,000	2,600	10.00	07/16/09
SOURCE	SAMPLE	213438-007	44,000	500	1.000	07/15/09
4931	SAMPLE	213438-008	ND	500	1.000	07/15/09
4932	SAMPLE	213438-009	48,000	2,600	10.00	07/16/09
	BLANK	QC503493	ND	500	1.000	07/15/09

ND= Not Detected
RL= Reporting Limit

Potassium

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Prepared:	07/14/09
Batch#:	152878		

Field ID	Type	Lab ID	Result	RL	Diln Fac	Analyzed
MW-1	SAMPLE	213438-001	770	500	1.000	07/15/09
MW-2	SAMPLE	213438-002	740	500	1.000	07/15/09
MW-3	SAMPLE	213438-003	ND	500	1.000	07/15/09
MW-4	SAMPLE	213438-004	ND	500	1.000	07/15/09
L5-COMP	SAMPLE	213438-005	5,000	500	1.000	07/15/09
L10-COMP	SAMPLE	213438-006	1,200	500	1.000	07/15/09
SOURCE	SAMPLE	213438-007	13,000	500	1.000	07/15/09
4931	SAMPLE	213438-008	ND	500	1.000	07/15/09
4932	SAMPLE	213438-009	12,000	5,000	10.00	07/16/09
	BLANK	QC503493	ND	500	1.000	07/15/09

ND= Not Detected
RL= Reporting Limit

Magnesium

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Prepared:	07/14/09
Diln Fac:	1.000	Analyzed:	07/15/09
Batch#:	152878		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	213438-001	52,000	500
MW-2	SAMPLE	213438-002	33,000	500
MW-3	SAMPLE	213438-003	53,000	500
MW-4	SAMPLE	213438-004	56,000	500
L5-COMP	SAMPLE	213438-005	77,000	500
L10-COMP	SAMPLE	213438-006	100,000	500
SOURCE	SAMPLE	213438-007	25,000	500
4931	SAMPLE	213438-008	ND	500
4932	SAMPLE	213438-009	26,000	500
	BLANK	QC503493	ND	500

ND= Not Detected
RL= Reporting Limit

Sodium

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	ug/L	Prepared:	07/14/09
Batch#:	152878		

Field ID	Type	Lab ID	Result	RL	Diln Fac	Analyzed
MW-1	SAMPLE	213438-001	41,000	500	1.000	07/15/09
MW-2	SAMPLE	213438-002	31,000	500	1.000	07/15/09
MW-3	SAMPLE	213438-003	38,000	500	1.000	07/15/09
MW-4	SAMPLE	213438-004	40,000	500	1.000	07/15/09
L5-COMP	SAMPLE	213438-005	250,000	5,000	10.00	07/16/09
L10-COMP	SAMPLE	213438-006	70,000	500	1.000	07/15/09
SOURCE	SAMPLE	213438-007	140,000	5,000	10.00	07/16/09
4931	SAMPLE	213438-008	530	500	1.000	07/15/09
4932	SAMPLE	213438-009	140,000	5,000	10.00	07/16/09
	BLANK	QC503493	ND	500	1.000	07/15/09

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Boron

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Batch#:	152878
Field ID:	MW-1	Sampled:	07/13/09
MSS Lab ID:	213438-001	Received:	07/13/09
Matrix:	Water	Prepared:	07/14/09
Units:	ug/L	Analyzed:	07/15/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC503494		2,000	1,992	100	80-120		
BSD	QC503495		2,000	2,024	101	80-120	2	20
MS	QC503496	192.8	2,000	2,133	97	75-124		
MSD	QC503497		2,000	2,221	101	75-124	4	20

RPD= Relative Percent Difference

Batch QC Report

Calcium

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Batch#:	152878
Field ID:	MW-1	Sampled:	07/13/09
MSS Lab ID:	213438-001	Received:	07/13/09
Matrix:	Water	Prepared:	07/14/09
Units:	ug/L	Analyzed:	07/15/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC503494		20,000	17,410	87	80-120		
BSD	QC503495		20,000	18,630	93	80-120	7	20
MS	QC503496	83,120	20,000	92,780	48 NM	55-136		
MSD	QC503497		20,000	88,180	25 NM	55-136	5	20

NM= Not Meaningful: Sample concentration > 4X spike concentration

RPD= Relative Percent Difference

Batch QC Report

Potassium

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Batch#:	152878
Field ID:	MW-1	Sampled:	07/13/09
MSS Lab ID:	213438-001	Received:	07/13/09
Matrix:	Water	Prepared:	07/14/09
Units:	ug/L	Analyzed:	07/15/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC503494		20,000	17,190	86	75-120		
BSD	QC503495		20,000	18,120	91	75-120	5	20
MS	QC503496	775.0	20,000	18,380	88	63-129		
MSD	QC503497		20,000	17,230	82	63-129	6	22

RPD= Relative Percent Difference

Batch QC Report

Magnesium

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Batch#:	152878
Field ID:	MW-1	Sampled:	07/13/09
MSS Lab ID:	213438-001	Received:	07/13/09
Matrix:	Water	Prepared:	07/14/09
Units:	ug/L	Analyzed:	07/15/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC503494		20,000	17,530	88	80-120		
BSD	QC503495		20,000	18,660	93	80-120	6	20
MS	QC503496	52,200	20,000	63,150	55 *	60-130		
MSD	QC503497		20,000	59,390	36 *	60-130	6	20

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Batch QC Report

Sodium

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Batch#:	152878
Field ID:	MW-1	Sampled:	07/13/09
MSS Lab ID:	213438-001	Received:	07/13/09
Matrix:	Water	Prepared:	07/14/09
Units:	ug/L	Analyzed:	07/15/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC503494		20,000	18,130	91	77-120		
BSD	QC503495		20,000	19,300	96	77-120	6	20
MS	QC503496	41,220	20,000	55,580	72	52-141		
MSD	QC503497		20,000	52,520	57	52-141	6	20

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Analytical Report

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	152819
Units:	mg/L	Received:	07/13/09

Field ID: MW-1 Lab ID: 213438-001
Type: SAMPLE Sampled: 07/13/09 08:50

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	60	1.0	5.000	07/13/09 19:33
Nitrogen, Nitrite	ND	0.05	1.000	07/13/09 17:31
Nitrogen, Nitrate	3.7	0.05	1.000	07/13/09 17:31
Sulfate	76	2.5	5.000	07/13/09 19:33

Field ID: MW-2 Lab ID: 213438-002
Type: SAMPLE Sampled: 07/13/09 10:00

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	28	1.0	5.000	07/13/09 19:16
Nitrogen, Nitrite	ND	0.05	1.000	07/13/09 17:13
Nitrogen, Nitrate	2.6	0.05	1.000	07/13/09 17:13
Sulfate	38	0.50	1.000	07/13/09 17:13

Field ID: MW-3 Lab ID: 213438-003
Type: SAMPLE Sampled: 07/13/09 12:40

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	60	1.0	5.000	07/13/09 22:11
Nitrogen, Nitrite	ND	0.05	1.000	07/13/09 17:48
Nitrogen, Nitrate	7.9	0.25	5.000	07/13/09 22:11
Sulfate	69	2.5	5.000	07/13/09 22:11

Field ID: MW-4 Lab ID: 213438-004
Type: SAMPLE Sampled: 07/13/09 11:25

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	61	1.0	5.000	07/13/09 22:28
Nitrogen, Nitrite	ND	0.05	1.000	07/13/09 18:06
Nitrogen, Nitrate	3.2	0.05	1.000	07/13/09 18:06
Sulfate	73	2.5	5.000	07/13/09 22:28

Field ID: L5-COMP Lab ID: 213438-005
Type: SAMPLE Sampled: 07/13/09

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	120	2.0	10.00	07/14/09 02:34
Nitrogen, Nitrite	ND	0.05	1.000	07/13/09 23:21
Nitrogen, Nitrate	1.7	0.05	1.000	07/13/09 23:21
Sulfate	540	25	50.00	07/14/09 00:13

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	152819
Units:	mg/L	Received:	07/13/09

Field ID: L10-COMP
Lab ID: 213438-006
Type: SAMPLE
Sampled: 07/13/09

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	81	1.0	5.000	07/14/09 02:16
Nitrogen, Nitrite	ND	0.05	1.000	07/13/09 18:58
Nitrogen, Nitrate	2.4	0.05	1.000	07/13/09 18:58
Sulfate	170	2.5	5.000	07/14/09 02:16

Field ID: SOURCE
Lab ID: 213438-007
Type: SAMPLE
Sampled: 07/13/09 09:30

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	200	2.0	10.00	07/14/09 01:59
Nitrogen, Nitrite	0.13	0.05	1.000	07/13/09 18:41
Nitrogen, Nitrate	12	0.25	5.000	07/14/09 01:41
Sulfate	94	2.5	5.000	07/14/09 01:41

Field ID: 4931
Diln Fac: 1.000
Type: SAMPLE
Sampled: 07/13/09
Lab ID: 213438-008
Analyzed: 07/13/09 16:56

Analyte	Result	RL
Chloride	ND	0.20
Nitrogen, Nitrite	ND	0.05
Nitrogen, Nitrate	ND	0.05
Sulfate	ND	0.50

Field ID: 4932
Lab ID: 213438-009
Type: SAMPLE
Sampled: 07/13/09

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	200	2.0	10.00	07/13/09 23:03
Nitrogen, Nitrite	0.11	0.05	1.000	07/13/09 18:23
Nitrogen, Nitrate	12	0.25	5.000	07/13/09 22:46
Sulfate	94	2.5	5.000	07/13/09 22:46

Type: BLANK
Diln Fac: 1.000
Lab ID: QC503285
Analyzed: 07/13/09 12:57

Analyte	Result	RL
Chloride	ND	0.20
Nitrogen, Nitrite	ND	0.05
Nitrogen, Nitrate	ND	0.05
Sulfate	ND	0.50

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Diln Fac:	1.000
Units:	mg/L	Batch#:	152819

Type:	BS	Analyzed:	07/13/09 13:15
Lab ID:	QC503286		

Analyte	Spiked	Result	%REC	Limits
Chloride	4.000	3.997	100	80-120
Nitrogen, Nitrite	1.000	0.9949	99	80-120
Nitrogen, Nitrate	1.000	1.037	104	80-120
Sulfate	10.00	10.03	100	80-120

Type:	BSD	Analyzed:	07/13/09 13:32
Lab ID:	QC503287		

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	4.000	3.978	99	80-120	0	20
Nitrogen, Nitrite	1.000	0.9887	99	80-120	1	20
Nitrogen, Nitrate	1.000	1.027	103	80-120	1	20
Sulfate	10.00	9.937	99	80-120	1	20

RPD= Relative Percent Difference

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Field ID:	MW-2	Diln Fac:	5.000
MSS Lab ID:	213438-002	Batch#:	152819
Matrix:	Water	Sampled:	07/13/09 10:00
Units:	mg/L	Received:	07/13/09

Type: MS
Analyzed: 07/13/09 21:01
Lab ID: QC503336

Analyte	MSS Result	Spiked	Result	%REC	Limits
Chloride	28.08	10.00	37.90	98	80-120
Nitrogen, Nitrite	<0.01181	2.500	2.628	105	80-120
Nitrogen, Nitrate	2.604	2.500	5.222	105	80-120
Sulfate	38.13	25.00	63.29	101	80-120

Type: MSD
Analyzed: 07/13/09 21:18
Lab ID: QC503337

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	10.00	37.93	98	80-120	0	20
Nitrogen, Nitrite	2.500	2.607	104	80-120	1	20
Nitrogen, Nitrate	2.500	5.174	103	80-120	1	20
Sulfate	25.00	63.10	100	80-120	0	20

RPD= Relative Percent Difference

Alkalinity

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	07/13/09
Units:	mg/L	Received:	07/13/09
Batch#:	152861	Analyzed:	07/14/09

Field ID: MW-1 Lab ID: 213438-001
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	360	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	360	6.7

Field ID: MW-2 Lab ID: 213438-002
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	300	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	300	6.7

Field ID: MW-3 Lab ID: 213438-003
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	460	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	460	6.7

Field ID: MW-4 Lab ID: 213438-004
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	460	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	460	6.7

Field ID: L5-COMP Lab ID: 213438-005
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	720	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	720	6.7

ND= Not Detected
RL= Reporting Limit

Alkalinity

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	07/13/09
Units:	mg/L	Received:	07/13/09
Batch#:	152861	Analyzed:	07/14/09

Field ID: L10-COMP   Lab ID: 213438-006
Type: SAMPLE   Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	730	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	730	6.7

Field ID: SOURCE   Lab ID: 213438-007
Type: SAMPLE   Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	170	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	170	6.7

Field ID: 4931   Lab ID: 213438-008
Type: SAMPLE   Diln Fac: 1.000

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	2.1	1.0

Field ID: 4932   Lab ID: 213438-009
Type: SAMPLE   Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	170	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	170	6.7

Type: BLANK   Diln Fac: 1.000
Lab ID: QC503433

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Alkalinity

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Units:	mg/L
Type:	LCS	Diln Fac:	4.000
Lab ID:	QC503434	Batch#:	152861
Matrix:	Water	Analyzed:	07/14/09

Spiked	**Result**	**%REC**	**Limits**
200.0	194.0	97	90-110

Batch QC Report

Alkalinity

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Diln Fac:	4.000
Field ID:	4932	Batch#:	152861
MSS Lab ID:	213438-009	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	mg/L	Analyzed:	07/14/09

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**
MS	QC503435	173.3	200.0	366.4	97	80-120		
MSD	QC503436		200.0	363.6	95	80-120	1	25

RPD= Relative Percent Difference

Total Cyanide

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	152914
Field ID:	SOURCE	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	mg/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	213438-007	ND	0.01
BLANK	QC503665	ND	0.01

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Cyanide

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	152914
MSS Lab ID:	213354-006	Sampled:	07/07/09
Matrix:	Water	Received:	07/08/09
Units:	mg/L	Analyzed:	07/16/09

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**
MS	QC503666	<0.01000	0.2000	0.1700	85	64-130		
MSD	QC503667		0.2000	0.1808	90	64-130	6	20
LCS	QC503668		0.2000	0.1839	92	80-123		

RPD= Relative Percent Difference

Dissolved Organic Carbon (DOC)

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Batch#:	152922
Matrix:	Water	Sampled:	07/13/09
Units:	mg/L	Received:	07/13/09
Diln Fac:	1.000	Analyzed:	07/20/09

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	213438-001	ND	1.0
MW-2	SAMPLE	213438-002	2.1	1.0
MW-3	SAMPLE	213438-003	ND	1.0
MW-4	SAMPLE	213438-004	ND	1.0
L5-COMP	SAMPLE	213438-005	7.8	1.0
L10-COMP	SAMPLE	213438-006	5.1	1.0
SOURCE	SAMPLE	213438-007	6.8	1.0
4931	SAMPLE	213438-008	ND	1.0
4932	SAMPLE	213438-009	6.8	1.0
	BLANK	QC503694	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Dissolved Organic Carbon (DOC)

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Diln Fac:	1.000
Field ID:	MW-1	Batch#:	152922
MSS Lab ID:	213438-001	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	mg/L	Analyzed:	07/20/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC503695		10.00	10.01	100	90-110		
MS	QC503696	0.6364	2.000	3.172	127 *	80-121		
MSD	QC503697		2.000	3.228	130 *	80-121	2	20

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Surfactants (MBAS)

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	152883
Field ID:	SOURCE	Sampled:	07/13/09 09:30
Matrix:	Water	Received:	07/13/09
Units:	mg/L	Analyzed:	07/15/09 09:15
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	213438-007	ND	0.20
BLANK	QC503525	ND	0.20

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Surfactants (MBAS)

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Diln Fac:	1.000
Field ID:	SOURCE	Batch#:	152883
MSS Lab ID:	213438-007	Sampled:	07/13/09 09:30
Matrix:	Water	Received:	07/13/09
Units:	mg/L	Analyzed:	07/15/09 09:15

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC503526	<0.2000	0.4800	0.5154	107	70-130		
MSD	QC503527		0.4800	0.5163	108	70-130	0	30
LCS	QC503528		0.4800	0.5228	109	80-120		

RPD= Relative Percent Difference

Total Phosphorous

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	mg/L	Prepared:	07/16/09
Batch#:	152915	Analyzed:	07/17/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	213438-001	0.11	0.030	1.000
MW-2	SAMPLE	213438-002	0.092	0.030	1.000
MW-3	SAMPLE	213438-003	0.055	0.030	1.000
MW-4	SAMPLE	213438-004	ND	0.030	1.000
L5-COMP	SAMPLE	213438-005	0.053	0.030	1.000
L10-COMP	SAMPLE	213438-006	0.042	0.030	1.000
SOURCE	SAMPLE	213438-007	0.53	0.15	5.000
4931	SAMPLE	213438-008	ND	0.030	1.000
4932	SAMPLE	213438-009	0.55	0.15	5.000
	BLANK	QC503669	ND	0.030	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Phosphorous

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Batch#:	152915
Field ID:	ZZZZZZZZZZ	Sampled:	07/07/09
MSS Lab ID:	213388-003	Received:	07/09/09
Matrix:	Water	Prepared:	07/16/09
Units:	mg/L	Analyzed:	07/17/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC503670	0.05314	0.1980	0.2420	95	18-179		
MSD	QC503671		0.1980	0.2452	97	18-179	1	35
LCS	QC503672		0.1980	0.1974	100	80-123		

RPD= Relative Percent Difference

Total Dissolved Solids (TDS)

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Sampled:	07/13/09
Matrix:	Water	Received:	07/13/09
Units:	mg/L	Prepared:	07/15/09
Batch#:	152902	Analyzed:	07/16/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	213438-001	580	10	1.000
MW-2	SAMPLE	213438-002	420	10	1.000
MW-3	SAMPLE	213438-003	700	10	1.000
MW-4	SAMPLE	213438-004	670	10	1.000
L5-COMP	SAMPLE	213438-005	1,690	14	1.429
L10-COMP	SAMPLE	213438-006	1,080	10	1.000
SOURCE	SAMPLE	213438-007	740	10	1.000
4931	SAMPLE	213438-008	ND	10	1.000
4932	SAMPLE	213438-009	730	10	1.000
	BLANK	QC503604	ND	10	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Dissolved Solids (TDS)

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Batch#:	152902
Field ID:	4932	Sampled:	07/13/09
MSS Lab ID:	213438-009	Received:	07/13/09
Matrix:	Water	Prepared:	07/15/09
Units:	mg/L	Analyzed:	07/16/09
Diln Fac:	1.000		

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**RL**	**%REC**	**Limits**	**RPD**	**Lim**
BS	QC503605		104.0	90.00		87	75-120		
BSD	QC503606		104.0	92.00		88	75-120	2	20
SDUP	QC503607	732.0		740.0	10.00			1	20

RL= Reporting Limit
RPD= Relative Percent Difference

Total Organic Carbon (TOC)

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Batch#:	152921
Matrix:	Water	Sampled:	07/13/09
Units:	mg/L	Received:	07/13/09
Diln Fac:	1.000		

Field ID	Type	Lab ID	Result	RL	Analyzed
MW-1	SAMPLE	213438-001	0.58	0.50	07/16/09
MW-2	SAMPLE	213438-002	ND	0.50	07/16/09
MW-3	SAMPLE	213438-003	0.55	0.50	07/17/09
MW-4	SAMPLE	213438-004	0.56	0.50	07/17/09
L5-COMP	SAMPLE	213438-005	7.8	0.50	07/16/09
L10-COMP	SAMPLE	213438-006	3.1	0.50	07/16/09
SOURCE	SAMPLE	213438-007	6.7	0.50	07/16/09
4931	SAMPLE	213438-008	ND	0.50	07/16/09
4932	SAMPLE	213438-009	6.8	0.50	07/16/09
	BLANK	QC503690	ND	0.50	07/16/09

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Organic Carbon (TOC)

Lab #:	213438	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	152921
MSS Lab ID:	213510-001	Sampled:	07/15/09
Matrix:	Water	Received:	07/16/09
Units:	mg/L	Analyzed:	07/16/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC503691		10.00	9.741	97	90-110		
MS	QC503692	1.082	2.000	2.983	95	58-122		
MSD	QC503693		2.000	2.975	95	58-122	0	20

RPD= Relative Percent Difference

Laboratory Job Number 213438

Subcontracted Products

Weck Laboratories, Inc.

Certificate of Analysis

Report Date: Wednesday, August 5, 2009
Received Date: Wednesday, July 15, 2009
Received Time: 9:35 am
Turnaround Time: Normal

Client: Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

Attn: Anna M. Pajarillo
Project: 213438

Phones: (800) 522-1878
Fax: (510) 486-0532

P.O. #:

Lab Sample ID: 9G15010-01 **Sample ID:** **MW-1** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 08:50** **Sample Note: 213438-001**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND	0.28	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:09 cwn	W9G0570	
Dibromoacetic acid (dbaa)	ND	0.13	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:09 cwn	W9G0570	
Dichloroacetic acid (dcaa)	ND	0.41	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:09 cwn	W9G0570	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:09 cwn	W9G0570	
Monobromoacetic acid (mbaa)	ND	0.21	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:09 cwn	W9G0570	
Monochloroacetic acid (mcaa)	ND	0.32	2.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:09 cwn	W9G0570	
Trichloroacetic acid (tcaa)	ND	0.22	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:09 cwn	W9G0570	
Surrogate: 2,3-Dibromopropionic acid	*108 %*		*70-130*							

Lab Sample ID: 9G15010-02 **Sample ID:** **MW-2** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 10:00** **Sample Note: 213438-002**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND	0.28	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:34 cwn	W9G0570	
Dibromoacetic acid (dbaa)	ND	0.13	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:34 cwn	W9G0570	
Dichloroacetic acid (dcaa)	ND	0.41	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:34 cwn	W9G0570	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:34 cwn	W9G0570	
Monobromoacetic acid (mbaa)	ND	0.21	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:34 cwn	W9G0570	
Monochloroacetic acid (mcaa)	ND	0.32	2.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:34 cwn	W9G0570	
Trichloroacetic acid (tcaa)	ND	0.22	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:34 cwn	W9G0570	
Surrogate: 2,3-Dibromopropionic acid	*90 %*		*70-130*							

Lab Sample ID: 9G15010-03 **Sample ID:** **MW-3** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 12:40** **Sample Note: 213438-003**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND	0.28	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:58 cwn	W9G0570	
Dibromoacetic acid (dbaa)	ND	0.13	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:58 cwn	W9G0570	
Dichloroacetic acid (dcaa)	ND	0.41	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:58 cwn	W9G0570	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:58 cwn	W9G0570	
Monobromoacetic acid (mbaa)	ND	0.21	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:58 cwn	W9G0570	
Monochloroacetic acid (mcaa)	ND	0.32	2.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:58 cwn	W9G0570	
Trichloroacetic acid (tcaa)	ND	0.22	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 17:58 cwn	W9G0570	

Certificate of Analysis

Lab Sample ID: 9G15010-03 **Sample ID:** **MW-3** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 12:40** **Sample Note: 213438-003**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Surrogate: 2,3-Dibromopropionic acid	*91 %*		*70-130*							

Lab Sample ID: 9G15010-04 **Sample ID:** **MW-4** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 11:25** **Sample Note: 213438-004**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND	0.28	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 18:23 cwn	W9G0570	
Dibromoacetic acid (dbaa)	ND	0.13	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 18:23 cwn	W9G0570	
Dichloroacetic acid (dcaa)	ND	0.41	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 18:23 cwn	W9G0570	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 18:23 cwn	W9G0570	
Monobromoacetic acid (mbaa)	ND	0.21	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 18:23 cwn	W9G0570	
Monochloroacetic acid (mcaa)	ND	0.32	2.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 18:23 cwn	W9G0570	
Trichloroacetic acid (tcaa)	ND	0.22	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 18:23 cwn	W9G0570	
Surrogate: 2,3-Dibromopropionic acid	*84 %*		*70-130*							

Lab Sample ID: 9G15010-05 **Sample ID:** **L5-COMP** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 00:00** **Sample Note: 213438-005**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND	0.28	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:11 cwn	W9G0570	
Dibromoacetic acid (dbaa)	ND	0.13	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:11 cwn	W9G0570	
Dichloroacetic acid (dcaa)	ND	0.41	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:11 cwn	W9G0570	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:11 cwn	W9G0570	
Monobromoacetic acid (mbaa)	ND	0.21	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:11 cwn	W9G0570	
Monochloroacetic acid (mcaa)	ND	0.32	2.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:11 cwn	W9G0570	
Trichloroacetic acid (tcaa)	ND	0.22	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:11 cwn	W9G0570	
Surrogate: 2,3-Dibromopropionic acid	*109 %*		*70-130*							

Lab Sample ID: 9G15010-06 **Sample ID:** **L10-COMP** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 00:00** **Sample Note: 213438-006**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND	0.28	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:36 cwn	W9G0570	
Dibromoacetic acid (dbaa)	ND	0.13	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:36 cwn	W9G0570	
Dichloroacetic acid (dcaa)	ND	0.41	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:36 cwn	W9G0570	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:36 cwn	W9G0570	
Monobromoacetic acid (mbaa)	ND	0.21	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:36 cwn	W9G0570	
Monochloroacetic acid (mcaa)	ND	0.32	2.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:36 cwn	W9G0570	
Trichloroacetic acid (tcaa)	ND	0.22	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 19:36 cwn	W9G0570	
Surrogate: 2,3-Dibromopropionic acid	*88 %*		*70-130*							

Lab Sample ID: 9G15010-07 **Sample ID:** **Source** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 09:30** **Sample Note: 213438-007**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	**2.0**	0.28	1.0	ug/l	1	EPA 552.2	7/16/09	7/25/09 11:16 cwn	W9G0570	

Certificate of Analysis

Lab Sample ID: 9G15010-07 **Sample ID:** **Source** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 09:30** **Sample Note: 213438-007**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Dibromoacetic acid (dbaa)	ND	0.13	1.0	ug/l	1	EPA 552.2	7/16/09	7/25/09 11:16 cwn	W9G0570	
Dichloroacetic acid (dcaa)	**3.9**	0.41	1.0	ug/l	1	EPA 552.2	7/16/09	7/25/09 11:16 cwn	W9G0570	
HAA5, Total	**11**		1.0	ug/l	1	EPA 552.2	7/16/09	7/25/09 11:16 cwn	W9G0570	
Monobromoacetic acid (mbaa)	ND	0.21	1.0	ug/l	1	EPA 552.2	7/16/09	7/25/09 11:16 cwn	W9G0570	
Monochloroacetic acid (mcaa)	ND	0.32	2.0	ug/l	1	EPA 552.2	7/16/09	7/25/09 11:16 cwn	W9G0570	
Trichloroacetic acid (tcaa)	**6.8**	0.22	1.0	ug/l	1	EPA 552.2	7/16/09	7/25/09 11:16 cwn	W9G0570	
Surrogate: 2,3-Dibromopropionic acid	*126 %*		*70-130*							

Lab Sample ID: 9G15010-08 **Sample ID:** **4931** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 00:00** **Sample Note: 213438-008**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	ND	0.28	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:25 cwn	W9G0570	
Dibromoacetic acid (dbaa)	ND	0.13	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:25 cwn	W9G0570	
Dichloroacetic acid (dcaa)	ND	0.41	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:25 cwn	W9G0570	
HAA5, Total	ND		1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:25 cwn	W9G0570	
Monobromoacetic acid (mbaa)	ND	0.21	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:25 cwn	W9G0570	
Monochloroacetic acid (mcaa)	ND	0.32	2.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:25 cwn	W9G0570	
Trichloroacetic acid (tcaa)	ND	0.22	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:25 cwn	W9G0570	
Surrogate: 2,3-Dibromopropionic acid	*115 %*		*70-130*							

Lab Sample ID: 9G15010-09 **Sample ID:** **4932** **Matrix:** Water
Sampled by: Client **Sampled: 07/13/09 00:00** **Sample Note: 213438-009**

Analyte	Result	DL	RL	Units	Dil	Method	Prepared	Analyzed	Batch	Qualifier
Bromochloroacetic acid (bcaa)	**1.7**	0.28	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:49 cwn	W9G0570	
Dibromoacetic acid (dbaa)	ND	0.13	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:49 cwn	W9G0570	
Dichloroacetic acid (dcaa)	**3.3**	0.41	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:49 cwn	W9G0570	
HAA5, Total	**9.3**		1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:49 cwn	W9G0570	
Monobromoacetic acid (mbaa)	ND	0.21	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:49 cwn	W9G0570	
Monochloroacetic acid (mcaa)	ND	0.32	2.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:49 cwn	W9G0570	
Trichloroacetic acid (tcaa)	**6.0**	0.22	1.0	ug/l	1	EPA 552.2	7/16/09	7/21/09 20:49 cwn	W9G0570	
Surrogate: 2,3-Dibromopropionic acid	*104 %*		*70-130*							

Certificate of Analysis

Quality Control Section

HAAs by EPA 552.2 - Quality Control

Batch W9G0570 - EPA 552.2

Blank (W9G0570-BLK1) **Prepared: 07/16/09** **Analyzed: 07/21/09 14:44**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*11.3*		ug/l	*10.0*	*113*	*70-130*		
Bromochloroacetic acid (bcaa)		ND		ug/l					
Monochloroacetic acid (mcaa)		ND		ug/l					
Monobromoacetic acid (mbaa)		ND		ug/l					
Dichloroacetic acid (dcaa)		ND		ug/l					
Trichloroacetic acid (tcaa)		ND		ug/l					
Dibromoacetic acid (dbaa)		ND		ug/l					
HAA5, Total		ND		ug/l					

LCS (W9G0570-BS1) **Prepared: 07/16/09** **Analyzed: 07/21/09 15:08**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.84*		ug/l	*10.0*	*98*	*70-130*		
Bromochloroacetic acid (bcaa)		9.79		ug/l	10.0	98	70-130		
Monochloroacetic acid (mcaa)		9.21		ug/l	10.0	92	70-130		
Monobromoacetic acid (mbaa)		9.08		ug/l	10.0	91	70-130		
Dichloroacetic acid (dcaa)		9.52		ug/l	10.0	95	70-130		
Trichloroacetic acid (tcaa)		9.07		ug/l	10.0	91	70-130		
Dibromoacetic acid (dbaa)		9.94		ug/l	10.0	99	70-130		

Matrix Spike (W9G0570-MS1) **Source: 9G15010-01** **Prepared: 07/16/09** **Analyzed: 07/21/09 09:39**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*11.4*		ug/l	*10.0*	*114*	*70-130*		
Bromochloroacetic acid (bcaa)	ND	12.0		ug/l	10.0	120	70-130		
Monochloroacetic acid (mcaa)	ND	9.99		ug/l	10.0	100	70-130		
Monobromoacetic acid (mbaa)	ND	11.9		ug/l	10.0	119	70-130		
Dichloroacetic acid (dcaa)	ND	10.9		ug/l	10.0	109	70-130		
Trichloroacetic acid (tcaa)	ND	11.7		ug/l	10.0	117	70-130		
Dibromoacetic acid (dbaa)	ND	11.7		ug/l	10.0	117	70-130		

Matrix Spike (W9G0570-MS2) **Source: 9G15010-02** **Prepared: 07/16/09** **Analyzed: 07/21/09 09:39**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*9.60*		ug/l	*10.0*	*96*	*70-130*		
Bromochloroacetic acid (bcaa)	ND	11.8		ug/l	10.0	118	70-130		
Monochloroacetic acid (mcaa)	ND	9.80		ug/l	10.0	98	70-130		
Monobromoacetic acid (mbaa)	ND	11.7		ug/l	10.0	117	70-130		
Dichloroacetic acid (dcaa)	ND	10.5		ug/l	10.0	105	70-130		
Trichloroacetic acid (tcaa)	ND	10.8		ug/l	10.0	108	70-130		
Dibromoacetic acid (dbaa)	ND	11.3		ug/l	10.0	113	70-130		

Matrix Spike Dup (W9G0570-MSD1) **Source: 9G15010-01** **Prepared: 07/16/09** **Analyzed: 07/21/09 09:39**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit

Certificate of Analysis

HAAs by EPA 552.2 - Quality Control

Batch W9G0570 - EPA 552.2

Matrix Spike Dup (W9G0570-MSD1) **Source: 9G15010-01** **Prepared: 07/16/09** **Analyzed: 07/21/09 09:39**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*10.1*		ug/l	*10.0*	*101*	*70-130*		
Bromochloroacetic acid (bcaa)	ND	11.2		ug/l	10.0	112	70-130	7	30
Monochloroacetic acid (mcaa)	ND	9.36		ug/l	10.0	94	70-130	6	30
Monobromoacetic acid (mbaa)	ND	11.5		ug/l	10.0	115	70-130	4	30
Dichloroacetic acid (dcaa)	ND	10.8		ug/l	10.0	108	70-130	1	30
Trichloroacetic acid (tcaa)	ND	10.7		ug/l	10.0	107	70-130	9	30
Dibromoacetic acid (dbaa)	ND	10.9		ug/l	10.0	109	70-130	6	30

Matrix Spike Dup (W9G0570-MSD2) **Source: 9G15010-02** **Prepared: 07/16/09** **Analyzed: 07/21/09 09:39**

Analyte	Sample Result	QC Result	Qualifier	Units	Spike Level	%REC	%REC Limits	RPD	RPD Limit
Surrogate: 2,3-Dibromopropionic acid		*10.9*		ug/l	*10.0*	*109*	*70-130*		
Bromochloroacetic acid (bcaa)	ND	12.5		ug/l	10.0	125	70-130	6	30
Monochloroacetic acid (mcaa)	ND	9.17		ug/l	10.0	92	70-130	7	30
Monobromoacetic acid (mbaa)	ND	12.2		ug/l	10.0	122	70-130	4	30
Dichloroacetic acid (dcaa)	ND	11.2		ug/l	10.0	112	70-130	7	30
Trichloroacetic acid (tcaa)	ND	11.7		ug/l	10.0	117	70-130	8	30
Dibromoacetic acid (dbaa)	ND	12.2		ug/l	10.0	122	70-130	8	30

Certificate of Analysis

Notes:
The Chain of Custody document is part of the analytical report.
Any remaining sample(s) for testing will be disposed of one month from the final report date unless other arrangements are made in advance.
All results are expressed on wet weight basis unless otherwise specified.

An Absence of Total Coliform meets the drinking water standards as established by the State of California Department of Health Services.
The Reporting Limit (RL) is referenced as laboratory's Practical Quantitation Limit (PQL).
For Potable water analysis, the Reporting Limit (RL) is referenced as Detection Limit for reporting purposes (DLRs) defined by EPA.

If sample collected by Weck Laboratories, sampled in accordance to lab SOP MIS002

Kim Tu

Authorized Signature

Contact: Kim G Tu (Project Manager)

ELAP # 1132
LACSD # 10143
NELAC # 04229CA

The results in this report apply to the samples analyzed in accordance with the chain of custody document. Weck Laboratories certifies that the test results meet all requirements of NELAC unless noted in the Case Narrative. This analytical report must be reproduced in its entirety.

Flags for Data Qualifiers:

ND	NOT DETECTED at or above the Reporting Limit. If J-value reported, then NOT DETECTED at or above the Method Detection Limit (MDL).
Sub	Subcontracted analysis, original report enclosed.
Dil	Dilution Factor
DL	Method Detection Limit
RL	Method Reporting Limit
MDA	Minimum Detectable Activity

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 559919

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 07-16-2009

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 07-13-2009
Date of Receipt: 07-13-2009
Date of Report: 07-16-2009

HETEROTROPHIC PLATE COUNT REPORT

Location:	MW-1	MW-2	MW-3
Comments (see below)	None	None	None
Lab ID-Version‡:	2483679-1	2483681-1	2483683-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	07/13/2009 at 01:00 PM	07/13/2009 at 01:00 PM	07/13/2009 at 01:00 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	2,500	380	340
Read Time	07/15/2009 at 01:00 PM	07/15/2009 at 01:00 PM	07/15/2009 at 01:00 PM

Comments:

Location:	MW-4	L5-Comp	L10-Comp
Comments (see below)	None	None	None
Lab ID-Version‡:	2483685-1	2483687-1	2483689-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	07/13/2009 at 01:00 PM	07/13/2009 at 01:00 PM	07/13/2009 at 01:00 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	560	1,700	2,700
Read Time	07/15/2009 at 01:00 PM	07/15/2009 at 01:00 PM	07/15/2009 at 01:00 PM

Comments:

Location:	Source	4931	4932
Comments (see below)	None	None	None
Lab ID-Version‡:	2483691-1	2483693-1	2483695-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:1	Plate Count Agar 1:10
Setup Time	07/13/2009 at 01:00 PM	07/13/2009 at 01:00 PM	07/13/2009 at 01:00 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	15,000 (est.*)	< 1	17,000 (est.*)
Read Time	07/15/2009 at 01:00 PM	07/15/2009 at 01:00 PM	07/15/2009 at 01:00 PM

Comments:

* Estimated result

‡ A "Version" greater than 1 indicates amended data.

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 559919

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 07-16-2009
MPN-Standard Bacteria: 07-20-2009

Project SOPs: MPN-Standard Bacteria (100130)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 07-13-2009
Date of Receipt: 07-13-2009
Date of Report: 07-20-2009

MPN REPORT

Location: MW-1 Lab ID-Version‡: 2483678-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	07/13/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	07/13/09 14:00	< 2	-	14
E. coli	SM 9221 F	07/13/09 14:00	< 2	-	14

Comments:

Location: MW-2 Lab ID-Version‡: 2483680-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	07/13/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	07/13/09 14:00	< 2	-	14
E. coli	SM 9221 F	07/13/09 14:00	< 2	-	14

Comments:

Location: MW-3 Lab ID-Version‡: 2483682-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	07/13/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	07/13/09 14:00	< 2	-	14
E. coli	SM 9221 F	07/13/09 14:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 07-13-2009
Date of Receipt: 07-13-2009
Date of Report: 07-20-2009

MPN REPORT

Location: MW-4 Lab ID-Version‡: 2483684-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	07/13/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	07/13/09 14:00	< 2	-	14
E. coli	SM 9221 F	07/13/09 14:00	< 2	-	14

Comments:

Location: L5-Comp Lab ID-Version‡: 2483686-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	07/13/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	07/13/09 14:00	< 2	-	14
E. coli	SM 9221 F	07/13/09 14:00	< 2	-	14

Comments:

Location: L10-Comp Lab ID-Version‡: 2483688-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	07/13/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	07/13/09 14:00	< 2	-	14
E. coli	SM 9221 F	07/13/09 14:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
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(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 07-13-2009
Date of Receipt: 07-13-2009
Date of Report: 07-20-2009

MPN REPORT

Location: Source
Lab ID-Version‡: 2483690-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	07/13/09 14:00	2	0.01	14
Total Coliform	SM 9221 B	07/13/09 14:00	24	8	72
E. coli	SM 9221 F	07/13/09 14:00	< 2	-	14

Comments:

Location: 4931
Lab ID-Version‡: 2483692-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	07/13/09 14:00	< 2	-	14
Total Coliform	SM 9221 B	07/13/09 14:00	< 2	-	14
E. coli	SM 9221 F	07/13/09 14:00	< 2	-	14

Comments:

Location: 4932
Lab ID-Version‡: 2483694-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	07/13/09 14:00	8	3	26
Total Coliform	SM 9221 B	07/13/09 14:00	46	11	190
E. coli	SM 9221 F	07/13/09 14:00	2	0.01	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
08/06/2009
MWH LABORATORIES

ACCREDITED IN ACCORDANCE WITH nelac
01114CA

RCZ: Rick Zimmer

Project Manager

Report#: 309844
Project:
RECYCLED-WATER-STUDY
Group: Chemistry
PO#: 30-12408

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH Laboratories
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 309844
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Rick Zimmer
Phone: 626-386-1157
PO #: 30-12408

The following samples were received from you on **July 15, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id			Sample Date
200907150167	L-5 Composite			13-Jul-2009 0000
	@PFC			
200907150168	L-10 Composite			13-Jul-2009 0000
	@NDMA_SPE	@PFC		
200907150169	MW-1			13-Jul-2009 0000
	@NDMA_SPE	@PFC		
200907150170	MW-2			13-Jul-2009 0000
	@NDMA_SPE	@PFC		
200907150171	MW-3			13-Jul-2009 0000
	@NDMA_SPE	@PFC		
200907150172	MW-4			13-Jul-2009 0000
	@NDMA_SPE	@PFC		
200907150173	Source			13-Jul-2009 0000
	@525PLUS	@NDMA_SPE	@PFC	
	EDTA			
200907150174	4991			13-Jul-2009 0000
	@NDMA_SPE	@PFC		
200907150175	4992			13-Jul-2009 0000
	@NDMA_SPE	@PFC		

Test Description

@525PLUS -- Semivolatiles by GCMS
@NDMA_SPE -- Nitrosamines by GCMS
@PFC -- Perfluorinated compounds

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

309844

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLES CHECKED AGAINST COC BY: JT

SAMPLES LOGGED IN BY: JS

SAMPLE TEMP WHEN REC'D AT LAB: 4° (Compliance: 4 +/- 2*C)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN ___ **PARTIALLY FROZEN** ___ **THAWED** ___

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

COMPLIANCE SAMPLES - Requires state forms ☐ ☐ (check for yes)

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: Locus

P.O.# / PROJECT JOB #: 27011-07-7000

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: H. Castro / J. Murphy /

TAT requested: rush by adv notice only
STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA	PFCs	EDTA	EPA525+	SAMPLER COMMENTS
7-13-09		L5 COMP	IDT	RGW		X	0	1	0	0	
	3/31	L10 COMP				X	1	1	0	0	
		MW-1			X		2	1	0	0	
		MW-2			X		2	1	0	0	
		MW-3			X		2	1	0	0	
		MW-4			X		2	1	0	0	
		Source			X		2	1	1	2	
		4991			X		2	1	0	0	
		4992			X		2	1	0	0	

*** MATRIX TYPES:**
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:			Locus Tech.	7-13-09	
RECEIVED BY:	Jane Herring	Jane Herring	MWH	7-13-09	11:35
RELINQUISHED BY:					
RECEIVED BY:		J Tripp	MWH	7-15-09	9:30

C-O-C# ______

PAGE ______ OF ______

MWH Laboratories, a Division of MWH Americas, Inc.
750 Royal Oaks Drive Suite 100
Monrovia, CA 91016 (626) 386-1100 FAX (626) 386-1124

Bottle Order for Locus Technologies

Group#

Date Sampled

Date Received

Richard.C.Zimmer **Your MWHL Project Manager**

Client Code LOCUS-MTNVIEW

Project Code RECYCLED-WATER-STUDY Bottle Orders

Group Name Chemistry

PO# / Job# 30-12408

BO #: 7218

Created By: RCZ

Order Date: 07/07/2009

Bottle Orders

Sampler: please return this paper with your samples

Ship By:
06/28/2009

Ship Sample Kits to	**Send Report to**	**Billing Address**
Locus Technologies	Locus Technologies	Locus Technologies
299 Fairchild Drive	299 Fairchild Drive	299 Fairchild Drive
Mountain View, CA 94043	Mountain View, CA 94043	Mountain View, CA 94043
Attn: Norman Wong	Attn: Norman Wong	Attn: Don Weltz
Phone: 650-641-8258	Phone: 650-641-8258	Phone: 650-641-8265
Fax: 650-960-0739	Fax: 650-960-0739	Fax: 650-960-0739

# of Samples	Tests	Qteline#	Bottles - Qty for each sample, type & preservative if any	UN DOT #
12	@NDMA_SPE		1 1L amber glass 80-100mg Sodium Thiosulfate	
9	@PFC		1 125ml poly no preservative	

4/31

Comments

Label Cooler "Recycled Water Study"

Per email from client: Client only needs 12 NDMA & 9 PFC bottles

Code	Status	Date Shipped	Via	Tracking #	# of Coolers	Prepared By

OnTrac
On Time Delivery For Less

800.334.5000
ontrac.com

D10010219195363

Date Printed 7/14/2009

Tracking#D10010219195363

Shipped From:
MWH Laboratories
910 Riverside Parkway 30
West Sacramento, CA 95605

Sent By: RITA REEVES
Phone#: (916)374-8030
wgt(lbs): 65
Reference:

Ship To Company:
MWH LABS SAMPLE RECEIVING
750 ROYAL OAKS DRIVE 100
MONROVIA, CA 91016
KIRK WAHRMAN (626)386-1092

Service: **G**
Sort Code: **COM**

Special Services:
Signature Required

OnTrac
On Time Delivery For Less
800.334.5000
ontrac.com

D10010219195298

Date Printed 7/14/2009

Tracking#D10010219195298

Shipped From:
MWH Laboratories
910 Riverside Parkway 30
West Sacramento, CA 95605

Sent By: RITA REEVES
Phone#: (916)374-8030
wgt(lbs): 65
Reference:

Ship To Company: **MWH LABS SAMPLE RECEIVING** **750 ROYAL OAKS DRIVE 100** **MONROVIA, CA 91016** **KIRK WAHRMAN (626)386-1092**	*Service:* **G** *Sort Code:* **COM** *Special Services:* **Signature Required**

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 309844

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
07/15/2009

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	200907150167	**L-5 Composite**				
07/27/2009 20:52	Perfluoro butanoic acid- PFBA		24		ng/L	20
07/27/2009 20:52	Perfluoro octanoic acid - PFOA		17		ng/L	5
	200907150168	**L-10 Composite**				
07/23/2009 17:59	N-Nitroso dimethylamine (NDMA)		5.0		ng/l	2
07/27/2009 21:03	Perfluoro octanoic acid - PFOA		6.9		ng/L	5
	200907150169	**MW-1**				
07/23/2009 18:43	N-Nitroso dimethylamine (NDMA)		2.1		ng/l	2
	200907150170	**MW-2**				
07/27/2009 21:26	Perfluoro octanoic acid - PFOA		9.9		ng/L	5
	200907150171	**MW-3**				
07/27/2009 21:38	Perfluoro octanoic acid - PFOA		9.9		ng/L	5
	200907150172	**MW-4**				
07/27/2009 21:49	Perfluoro octanoic acid - PFOA		15		ng/L	5
	200907150173	**Source**				
08/03/2009 07:56	N-Nitroso dimethylamine (NDMA)		350		ng/l	20
07/27/2009 22:01	Perfluoro octanesulfonate-PFOS		46		ng/L	5
07/27/2009 22:01	Perfluoro octanoic acid - PFOA		41		ng/L	5
	200907150175	**4992**				
07/23/2009 22:22	N-Nitroso dimethylamine (NDMA)		240		ng/l	20
07/27/2009 22:24	Perfluoro octanesulfonate-PFOS		60		ng/L	5
07/27/2009 22:24	Perfluoro octanoic acid - PFOA		51		ng/L	5

SUMMARY OF POSITIVE DATA ONLY

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
07/15/2009

L-5 Composite (200907150167) **Sampled on 07/13/2009 0000**

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	07/27/2009 20:52	518234	(MWH PFC)	Perfluoro butanoic acid- PFBA	24	ng/L	20	1
	07/27/2009 20:52	518234	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	07/27/2009 20:52	518234	(MWH PFC)	Perfluoro octanoic acid - PFOA	17	ng/L	5	1
	07/27/2009 20:52	518234	(MWH PFC)	PFBA-C13	88	%		1
	07/27/2009 20:52	518234	(MWH PFC)	PFOA-C13	91	%		1
	07/27/2009 20:52	518234	(MWH PFC)	PFOS-C13	57	%		1

L-10 Composite (200907150168) **Sampled on 07/13/2009 0000**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
7/21/2009	07/23/2009 17:59	517444	(EPA 521)	N-Nitroso dimethylamine (NDMA)	5.0	ng/l	2	1
7/21/2009	07/23/2009 17:59	517444	(EPA 521)	NDMA-D6	87	%		1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	07/27/2009 21:03	518234	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	07/27/2009 21:03	518234	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	07/27/2009 21:03	518234	(MWH PFC)	Perfluoro octanoic acid - PFOA	6.9	ng/L	5	1
	07/27/2009 21:03	518234	(MWH PFC)	PFBA-C13	88	%		1
	07/27/2009 21:03	518234	(MWH PFC)	PFOA-C13	90	%		1
	07/27/2009 21:03	518234	(MWH PFC)	PFOS-C13	52	%		1

MW-1 (200907150169) **Sampled on 07/13/2009 0000**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
7/21/2009	07/23/2009 18:43	517444	(EPA 521)	N-Nitroso dimethylamine (NDMA)	2.1	ng/l	2	1
7/21/2009	07/23/2009 18:43	517444	(EPA 521)	NDMA-D6	91	%		1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	07/27/2009 21:15	518234	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	07/27/2009 21:15	518234	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	07/27/2009 21:15	518234	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	07/27/2009 21:15	518234	(MWH PFC)	PFBA-C13	84	%		1
	07/27/2009 21:15	518234	(MWH PFC)	PFOA-C13	84	%		1
	07/27/2009 21:15	518234	(MWH PFC)	PFOS-C13	55	%		1

MW-2 (200907150170) **Sampled on 07/13/2009 0000**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
7/21/2009	07/23/2009 19:27	517444	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
07/15/2009

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
7/21/2009	07/23/2009	19:27	517444	(EPA 521)	NDMA-D6	92	%		1
		MWH PFC - Perfluorinated compounds							
	07/27/2009	21:26	518234	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	07/27/2009	21:26	518234	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	07/27/2009	21:26	518234	(MWH PFC)	Perfluoro octanoic acid - PFOA	9.9	ng/L	5	1
	07/27/2009	21:26	518234	(MWH PFC)	PFBA-C13	93	%		1
	07/27/2009	21:26	518234	(MWH PFC)	PFOA-C13	84	%		1
	07/27/2009	21:26	518234	(MWH PFC)	PFOS-C13	68	%		1
MW-3 (200907150171)							**Sampled on**	**07/13/2009 0000**	
		EPA 521 - Nitrosamines by GCMS							
7/21/2009	07/23/2009	20:11	517444	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
7/21/2009	07/23/2009	20:11	517444	(EPA 521)	NDMA-D6	94	%		1
		MWH PFC - Perfluorinated compounds							
	07/27/2009	21:38	518234	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	07/27/2009	21:38	518234	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	07/27/2009	21:38	518234	(MWH PFC)	Perfluoro octanoic acid - PFOA	9.9	ng/L	5	1
	07/27/2009	21:38	518234	(MWH PFC)	PFBA-C13	87	%		1
	07/27/2009	21:38	518234	(MWH PFC)	PFOA-C13	89	%		1
	07/27/2009	21:38	518234	(MWH PFC)	PFOS-C13	60	%		1
MW-4 (200907150172)							**Sampled on**	**07/13/2009 0000**	
		EPA 521 - Nitrosamines by GCMS							
7/21/2009	07/23/2009	20:55	517444	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
7/21/2009	07/23/2009	20:55	517444	(EPA 521)	NDMA-D6	93	%		1
		MWH PFC - Perfluorinated compounds							
	07/27/2009	21:49	518234	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	07/27/2009	21:49	518234	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	07/27/2009	21:49	518234	(MWH PFC)	Perfluoro octanoic acid - PFOA	15	ng/L	5	1
	07/27/2009	21:49	518234	(MWH PFC)	PFBA-C13	89	%		1
	07/27/2009	21:49	518234	(MWH PFC)	PFOA-C13	85	%		1
	07/27/2009	21:49	518234	(MWH PFC)	PFOS-C13	57	%		1
Source (200907150173)							**Sampled on**	**07/13/2009 0000**	
		EPA 525.2 - Semivolatiles by GCMS							
7/23/2009	07/28/2009	6:00	518448	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
7/23/2009	07/28/2009	6:00	518448	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
07/15/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Aldrin	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Heptachlor	ND	ug/L	0.03	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.2	1

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	97	%		1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Perylene-d12	89	%		1
7/23/2009	07/28/2009 6:00	518448	(EPA 525.2)	Triphenylphosphate	109	%		1
		EPA 521 - Nitrosamines by GCMS						
7/27/2009	08/03/2009 07:56	518675	(EPA 521)	N-Nitroso dimethylamine (NDMA)	350	ng/l	20	10
7/27/2009	08/03/2009 07:56	518675	(EPA 521)	NDMA-D6	105	%		1
		MWH_MET - NTA and EDTA by Ion Chromatography						
	07/19/2009 08:36	518132	(MWH_MET)	EDTA	ND	mg/L	0.1	1
		MWH PFC - Perfluorinated compounds						
	07/27/2009 22:01	518234	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	07/27/2009 22:01	518234	(MWH PFC)	Perfluoro octanesulfonate-PFOS	46	ng/L	5	1
	07/27/2009 22:01	518234	(MWH PFC)	Perfluoro octanoic acid - PFOA	41	ng/L	5	1
	07/27/2009 22:01	518234	(MWH PFC)	PFBA-C13	95	%		1
	07/27/2009 22:01	518234	(MWH PFC)	PFOA-C13	93	%		1
	07/27/2009 22:01	518234	(MWH PFC)	PFOS-C13	29	%		1
4991 (200907150174)						**Sampled on**	**07/13/2009 0000**	
		EPA 521 - Nitrosamines by GCMS						
7/21/2009	07/23/2009 21:38	517444	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
7/21/2009	07/23/2009 21:38	517444	(EPA 521)	NDMA-D6	77	%		1
		MWH PFC - Perfluorinated compounds						
	07/27/2009 22:12	518234	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	07/27/2009 22:12	518234	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	07/27/2009 22:12	518234	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	07/27/2009 22:12	518234	(MWH PFC)	PFBA-C13	95	%		1
	07/27/2009 22:12	518234	(MWH PFC)	PFOA-C13	92	%		1
	07/27/2009 22:12	518234	(MWH PFC)	PFOS-C13	96	%		1
4992 (200907150175)						**Sampled on**	**07/13/2009 0000**	
		EPA 521 - Nitrosamines by GCMS						
7/21/2009	07/23/2009 22:22	517444	(EPA 521)	N-Nitroso dimethylamine (NDMA)	240	ng/l	20	10
7/21/2009	07/23/2009 22:22	517444	(EPA 521)	NDMA-D6	107	%		1
		MWH PFC - Perfluorinated compounds						
	07/27/2009 22:24	518234	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	07/27/2009 22:24	518234	(MWH PFC)	Perfluoro octanesulfonate-PFOS	60	ng/L	5	1

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Samples Received on:
07/15/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	07/27/2009 22:24	518234	(MWH PFC)	Perfluoro octanoic acid - PFOA	51	ng/L	5	1
	07/27/2009 22:24	518234	(MWH PFC)	PFBA-C13	92	%		1
	07/27/2009 22:24	518234	(MWH PFC)	PFOA-C13	79	%		1
	07/27/2009 22:24	518234	(MWH PFC)	PFOS-C13	21	%		1

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Laboratory Comments
Report: #309844

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Group Comments

NDMA MS Duplicate recovery was low on the initial run (518363). However, QC recoveries for subsequent runs were within method requirements. Therefore, data is acceptable for reporting.

QC Ref # 517444 - Nitrosamines by GCMS **Analysis Date: 07/23/2009**

200907150168	L-10 Composite	Analyzed by: KAM
200907150169	MW-1	Analyzed by: KAM
200907150170	MW-2	Analyzed by: KAM
200907150171	MW-3	Analyzed by: KAM
200907150172	MW-4	Analyzed by: KAM
200907150174	4991	Analyzed by: KAM
200907150175	4992	Analyzed by: KAM

QC Ref # 518132 - NTA and EDTA by Ion Chromatography **Analysis Date: 07/19/2009**

200907150173	Source	Analyzed by: DYM

QC Ref # 518234 - Perfluorinated compounds **Analysis Date: 07/27/2009**

200907150167	L-5 Composite	Analyzed by: LHZ
200907150168	L-10 Composite	Analyzed by: LHZ
200907150169	MW-1	Analyzed by: LHZ
200907150170	MW-2	Analyzed by: LHZ
200907150171	MW-3	Analyzed by: LHZ
200907150172	MW-4	Analyzed by: LHZ
200907150173	Source	Analyzed by: LHZ
200907150174	4991	Analyzed by: LHZ
200907150175	4992	Analyzed by: LHZ

QC Ref # 518448 - Semivolatiles by GCMS **Analysis Date: 07/28/2009**

200907150173	Source	Analyzed by: JWC

QC Ref # 518675 - Nitrosamines by GCMS **Analysis Date: 08/03/2009**

200907150173	Source	Analyzed by: KAM

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QC Ref# 517444 - Nitrosamines by GCMS by EPA 521

Analysis Date: 07/23/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
CCCH	N-Nitroso dimethylamine (NDMA)		100	104	ng/l	104	(70-130)		
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	1.81	ng/l	90	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	36.6	ng/l	92	(70-130)		
LCS2	N-Nitroso dimethylamine (NDMA)		80	61.1	ng/l	76	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/l				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	2.03	ng/l	102	(50-150)		
MS2_200907170089	N-Nitroso dimethylamine (NDMA)	ND	40	32.1	ng/l	80	(70-130)		
MSD2_200907170089	N-Nitroso dimethylamine (NDMA)	ND	40	30.3	ng/l	73	(70-130)	20	9.3
CCCH	N-Nitrosodi-n-propylamin(NDPA)		100	109	ng/l	109	(70-130)		
CCCL	N-Nitrosodi-n-propylamin(NDPA)		2.0	1.72	ng/l	86	(50-150)		
CCCM	N-Nitrosodi-n-propylamin(NDPA)		40	41.3	ng/l	103	(70-130)		
LCS2	N-Nitrosodi-n-propylamin(NDPA)		80	69.1	ng/l	86	(70-130)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/l				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2.0	1.43	ng/l	72	(50-150)		
MS2_200907170089	N-Nitrosodi-n-propylamin(NDPA)		40	30.2	ng/l	76	(70-130)		
MSD2_200907170089	N-Nitrosodi-n-propylamin(NDPA)		40	28.7	ng/l	72	(70-130)	20	5.0
CCCH	N-Nitrosodibutylamine (NDBA)		100	101	ng/l	101	(70-130)		
CCCL	N-Nitrosodibutylamine (NDBA)		2.0	1.61	ng/l	81	(50-150)		
CCCM	N-Nitrosodibutylamine (NDBA)		40	33.6	ng/l	84	(70-130)		
LCS2	N-Nitrosodibutylamine (NDBA)		80	60.5	ng/l	76	(70-130)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/l				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2.0	1.78	ng/l	89	(50-150)		
MS2_200907170089	N-Nitrosodibutylamine (NDBA)		40	28.4	ng/l	71	(70-130)		
MSD2_200907170089	N-Nitrosodibutylamine (NDBA)		40	26.9	ng/l	**67**	(70-130)	20	5.2
CCCH	N-Nitrosodiethylamine (NDEA)		100	106	ng/l	106	(70-130)		
CCCL	N-Nitrosodiethylamine (NDEA)		2.0	1.83	ng/l	91	(50-150)		
CCCM	N-Nitrosodiethylamine (NDEA)		40	40.3	ng/l	101	(70-130)		
LCS2	N-Nitrosodiethylamine (NDEA)		80	67.3	ng/l	84	(70-130)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/l				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2.0	2.45	ng/l	123	(50-150)		
MS2_200907170089	N-Nitrosodiethylamine (NDEA)		40	31.8	ng/l	80	(70-130)		
MSD2_200907170089	N-Nitrosodiethylamine (NDEA)		40	31.9	ng/l	80	(70-130)	20	0.38
CCCH	N-Nitrosomethylethylamin(NMEA)		100	102	ng/l	102	(70-130)		
CCCL	N-Nitrosomethylethylamin(NMEA)		2.0	1.82	ng/l	91	(50-150)		
CCCM	N-Nitrosomethylethylamin(NMEA)		40	38.7	ng/l	97	(70-130)		
LCS2	N-Nitrosomethylethylamin(NMEA)		80	62.6	ng/l	78	(70-130)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/l				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2.0	1.84	ng/l	92	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS2_200907170089	N-Nitrosomethylethylamin(NMEA)		40	30.0	ng/l	75	(70-130)		
MSD2_200907170089	N-Nitrosomethylethylamin(NMEA)		40	28.6	ng/l	72	(70-130)	20	4.9
CCCH	N-Nitrosopyrollidine (NPYR)		100	98.6	ng/l	99	(70-130)		
CCCL	N-Nitrosopyrollidine (NPYR)		2.0	1.6	ng/l	80	(50-150)		
CCCM	N-Nitrosopyrollidine (NPYR)		40	39.4	ng/l	99	(70-130)		
LCS2	N-Nitrosopyrollidine (NPYR)		80	66.7	ng/l	83	(70-130)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/l				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2.0	1.48	ng/l	74	(50-150)		
MS2_200907170089	N-Nitrosopyrollidine (NPYR)		40	33.5	ng/l	84	(70-130)		
MSD2_200907170089	N-Nitrosopyrollidine (NPYR)		40	31.6	ng/l	79	(70-130)	20	5.7
CCCH	NDMA-D6 (S)			112	%	112	(70-130)		
CCCL	NDMA-D6 (S)			90.6	%	91	(70-130)		
CCCM	NDMA-D6 (S)			95.6	%	96	(70-130)		
LCS2	NDMA-D6 (S)			85.8	%	86	(70-130)		
MBLK	NDMA-D6 (S)			98.7	%	99	(70-130)		
MRL_CHK	NDMA-D6 (S)			74.6	%	75	(70-130)		
MS2_200907170089	NDMA-D6 (S)			83.7	%	84	(70-130)		
MSD2_200907170089	NDMA-D6 (S)			74.2	%	74	(70-130)		

QC Ref# 518132 - NTA and EDTA by Ion Chromatography by MWH_MET — Analysis Date: 07/18/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	EDTA		0.5	0.489	mg/L	98	(80-120)		
LCS2	EDTA		0.5	0.493	mg/L	99	(80-120)	20	0.82
MBLK	EDTA			<0.1	mg/L				
MRL_CHK	EDTA		0.1	0.109	mg/L	109	(50-150)		
MS_200907090597	EDTA	ND	0.5	0.537	mg/L	107	(80-120)		
MS_200907140003	EDTA	ND	0.5	0.475	mg/L	95	(80-120)		
MSD_200907090597	EDTA	ND	0.5	0.544	mg/L	109	(80-120)	20	1.9
MSD_200907140003	EDTA	ND	0.5	0.470	mg/L	94	(80-120)	20	0.95
LCS1	NTA		0.2	0.210	mg/L	105	(80-120)		
LCS2	NTA		0.2	0.213	mg/L	107	(80-120)	20	1.4
MBLK	NTA			<0.1	mg/L				
MRL_CHK	NTA		0.1	0.115	mg/L	115	(50-150)		
MS_200907090597	NTA	ND	0.2	0.192	mg/L	96	(80-120)		
MS_200907140003	NTA	ND	0.2	0.185	mg/L	92	(80-120)		
MSD_200907090597	NTA	ND	0.2	0.138	mg/L	**69**	(80-120)	20	**33**
MSD_200907140003	NTA	ND	0.2	0.187	mg/L	94	(80-120)	20	1.3

QC Ref# 518234 - Perfluorinated compounds by MWH PFC — Analysis Date: 07/27/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluoro butanoic acid- PFBA		50	52.2	ng/L	104	(70-130)		
LCS2	Perfluoro butanoic acid- PFBA		50	49.7	ng/L	99	(70-130)	20	4.9

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Perfluoro butanoic acid- PFBA			<20	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		20	23.0	ng/L	115	(50-150)		
MS_200907150167	Perfluoro butanoic acid- PFBA	24	50	72.6	ng/l	97	(70-130)		
MSD_200907150167	Perfluoro butanoic acid- PFBA	24	50	71.6	ng/l	95	(70-130)	30	2.1
LCS1	Perfluoro octanesulfonate-PFOS		50	50.1	ng/L	100	(70-130)		
LCS2	Perfluoro octanesulfonate-PFOS		50	55.7	ng/L	111	(70-130)	20	11
MBLK	Perfluoro octanesulfonate-PFOS			<5	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		5.0	5.54	ng/L	111	(50-150)		
MS_200907150167	Perfluoro octanesulfonate-PFOS	ND	50	54.4	ng/l	105	(70-130)		
MSD_200907150167	Perfluoro octanesulfonate-PFOS	ND	50	57.0	ng/l	110	(70-130)	30	4.7
LCS1	Perfluoro octanoic acid - PFOA		50	50.5	ng/L	101	(70-130)		
LCS2	Perfluoro octanoic acid - PFOA		50	55.1	ng/L	110	(70-130)	20	8.7
MBLK	Perfluoro octanoic acid - PFOA			<5	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	6.5	ng/L	130	(50-150)		
MS_200907150167	Perfluoro octanoic acid - PFOA	17	50	68.0	ng/l	101	(70-130)		
MSD_200907150167	Perfluoro octanoic acid - PFOA	17	50	63.4	ng/l	92	(70-130)	30	9.1
LCS1	PFBA-C13 (I)			90.8	%	91	(50-150)		
LCS2	PFBA-C13 (I)			95.2	%	95	(50-150)		
MBLK	PFBA-C13 (I)			99.8	%	100	(50-150)		
MRL_CHK	PFBA-C13 (I)			102	%	102	(20-130)		
MS_200907150167	PFBA-C13 (I)			90.1	%	90	(20-130)		
MSD_200907150167	PFBA-C13 (I)			89.3	%	89	(20-130)		
LCS1	PFOA-C13 (I)			94.7	%	95	(50-150)		
LCS2	PFOA-C13 (I)			93.1	%	93	(50-150)		
MBLK	PFOA-C13 (I)			94.3	%	94	(50-150)		
MRL_CHK	PFOA-C13 (I)			92.1	%	92	(20-130)		
MS_200907150167	PFOA-C13 (I)			88.4	%	88	(20-130)		
MSD_200907150167	PFOA-C13 (I)			92.6	%	93	(20-130)		
LCS1	PFOS-C13 (I)			97.0	%	97	(50-150)		
LCS2	PFOS-C13 (I)			91.2	%	91	(50-150)		
MBLK	PFOS-C13 (I)			98.7	%	99	(50-150)		
MRL_CHK	PFOS-C13 (I)			96.8	%	97	(20-130)		
MS_200907150167	PFOS-C13 (I)			82.2	%	82	(20-130)		
MSD_200907150167	PFOS-C13 (I)			62.2	%	62	(20-130)		

QC Ref# 518363 - Nitrosamines by GCMS by EPA 521 **Analysis Date: 07/31/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	N-Nitroso dimethylamine (NDMA)		40	32.1	ng/l	80	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/l				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	1.93	ng/l	96	(50-150)		
MS1_200907170172	N-Nitroso dimethylamine (NDMA)	ND	2.0	2.4	ng/l	62	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MSD1_200907170172	N-Nitroso dimethylamine (NDMA)	ND	2.0	1.92	ng/l	**38**	(50-150)	20	**48**
LCS1	NDMA-D6 (S)			81.0	%	81	(70-130)		
MBLK	NDMA-D6 (S)			85.6	%	86	(70-130)		
MRL_CHK	NDMA-D6 (S)			79.6	%	80	(70-130)		
MS1_200907170172	NDMA-D6 (S)			93.5	%	94	(70-130)		
MSD1_200907170172	NDMA-D6 (S)			83.0	%	83	(70-130)		

QC Ref# 518448 - Semivolatiles by GCMS by EPA 525.2 Analysis Date: 07/27/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,3-Dimethyl-2-nitrobenzene (S)			96.0	%	96	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)			95.3	%	95	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			97.6	%	98	(70-130)		
MRLHI	1,3-Dimethyl-2-nitrobenzene (S)			97.9	%	98	(70-130)		
MRLLW	1,3-Dimethyl-2-nitrobenzene (S)			96.5	%	97	(70-130)		
MRLMD	1,3-Dimethyl-2-nitrobenzene (S)			95.1	%	95	(70-130)		
MS_200907150180	1,3-Dimethyl-2-nitrobenzene (S)			98.3	%	98	(70-130)		
LCS1	2,4-Dinitrotoluene		2.0	2.03	ug/L	102	(70-130)		
LCS2	2,4-Dinitrotoluene		2.0	1.96	ug/L	98	(70-130)	20	3.5
MBLK	2,4-Dinitrotoluene			<0.05	ug/L				
MRLHI	2,4-Dinitrotoluene		0.1	0.0850	ug/L	85	(50-150)		
MS_200907150180	2,4-Dinitrotoluene		2.0	2.02	ug/L	101	(70-130)		
LCS1	2,6-Dinitrotoluene		2.0	2.03	ug/L	102	(70-130)		
LCS2	2,6-Dinitrotoluene		2.0	1.9	ug/L	95	(70-130)	20	6.6
MBLK	2,6-Dinitrotoluene			<0.05	ug/L				
MRLHI	2,6-Dinitrotoluene		0.1	0.101	ug/L	101	(50-150)		
MS_200907150180	2,6-Dinitrotoluene		2.0	2.02	ug/L	101	(70-130)		
LCS1	4,4-DDD		2.0	2.48	ug/L	124	(70-130)		
LCS2	4,4-DDD		2.0	2.49	ug/L	125	(70-130)	20	0.0
MBLK	4,4-DDD			<0.05	ug/L				
MRLHI	4,4-DDD		0.1	0.113	ug/L	113	(50-150)		
MS_200907150180	4,4-DDD		2.0	2.48	ug/L	124	(70-130)		
LCS1	4,4-DDE		2.0	2.26	ug/L	113	(70-130)		
LCS2	4,4-DDE		2.0	2.24	ug/L	112	(70-130)	20	0.89
MBLK	4,4-DDE			<0.05	ug/L				
MRLHI	4,4-DDE		0.1	0.115	ug/L	115	(50-150)		
MS_200907150180	4,4-DDE		2.0	2.16	ug/L	108	(70-130)		
LCS1	4,4-DDT		2.0	2.48	ug/L	124	(70-130)		
LCS2	4,4-DDT		2.0	2.45	ug/L	123	(70-130)	20	1.2
MBLK	4,4-DDT			<0.05	ug/L				
MRLHI	4,4-DDT		0.1	0.0980	ug/L	98	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200907150180	4,4-DDT		2.0	2.35	ug/L	118	(70-130)		
LCS1	Acenaphthene		2.0	2.14	ug/L	107	(70-130)		
LCS2	Acenaphthene		2.0	2.17	ug/L	109	(70-130)	20	1.4
MBLK	Acenaphthene			<0.05	ug/L				
MRLHI	Acenaphthene		0.1	0.113	ug/L	113	(50-150)		
MS_200907150180	Acenaphthene		2.0	2.15	ug/L	107	(70-130)		
LCS1	Acenaphthene-d10 (I)			79.4	%	79	(50-150)		
LCS2	Acenaphthene-d10 (I)			71.3	%	71	(50-150)		
MBLK	Acenaphthene-d10 (I)			79.4	%	79	(50-150)		
MRLHI	Acenaphthene-d10 (I)			71.4	%	71	(50-150)		
MRLLW	Acenaphthene-d10 (I)			78.9	%	79	(50-150)		
MRLMD	Acenaphthene-d10 (I)			68.3	%	68	(50-150)		
MS_200907150180	Acenaphthene-d10 (I)			74.4	%	74	(50-150)		
LCS1	Acenaphthylene		2.0	1.97	ug/L	99	(70-130)		
LCS2	Acenaphthylene		2.0	1.97	ug/L	98	(70-130)	20	0.0
MBLK	Acenaphthylene			<0.05	ug/L				
MRLHI	Acenaphthylene		0.1	0.0980	ug/L	98	(50-150)		
MS_200907150180	Acenaphthylene		2.0	2.1	ug/L	105	(70-130)		
LCS1	Acetochlor		2.0	2.34	ug/L	117	(70-130)		
LCS2	Acetochlor		2.0	2.32	ug/L	116	(70-130)	20	0.86
MBLK	Acetochlor			<0.05	ug/L				
MRLHI	Acetochlor		0.1	0.116	ug/L	116	(50-150)		
MS_200907150180	Acetochlor		2.0	2.25	ug/L	112	(70-130)		
LCS1	Alachlor		2.0	2.36	ug/L	118	(70-130)		
LCS2	Alachlor		2.0	2.29	ug/L	114	(70-130)	20	3.0
MBLK	Alachlor			<0.025	ug/L				
MRLHI	Alachlor		0.1	0.129	ug/L	129	(50-150)		
MRLMD	Alachlor		0.05	0.0620	ug/L	124	(50-150)		
MS_200907150180	Alachlor		2.0	2.31	ug/L	116	(70-130)		
LCS1	Aldrin		2.0	1.69	ug/L	85	(70-130)		
LCS2	Aldrin		2.0	1.69	ug/L	84	(70-130)	20	0.0
MBLK	Aldrin			<0.025	ug/L				
MRLHI	Aldrin		0.1	0.108	ug/L	108	(50-150)		
MRLMD	Aldrin		0.05	0.0270	ug/L	54	(50-150)		
MS_200907150180	Aldrin		2.0	1.75	ug/L	88	(70-130)		
LCS1	Alpha-BHC		2.0	2.29	ug/L	114	(70-130)		
LCS2	Alpha-BHC		2.0	2.27	ug/L	114	(70-130)	20	0.44
MBLK	Alpha-BHC			<0.05	ug/L				
MRLHI	Alpha-BHC		0.1	0.124	ug/L	124	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates
are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200907150180	Alpha-BHC		2.0	2.21	ug/L	111	(70-130)		
LCS1	alpha-Chlordane		2.0	2.36	ug/L	118	(70-130)		
LCS2	alpha-Chlordane		2.0	2.39	ug/L	120	(70-130)	20	1.3
MBLK	alpha-Chlordane			<0.025	ug/L				
MRLHI	alpha-Chlordane		0.1	0.130	ug/L	130	(50-150)		
MRLMD	alpha-Chlordane		0.05	0.0610	ug/L	122	(50-150)		
MS_200907150180	alpha-Chlordane		2.0	2.38	ug/L	119	(70-130)		
LCS1	Anthracene		2.0	2.17	ug/L	109	(70-130)		
LCS2	Anthracene		2.0	2.16	ug/L	108	(70-130)	20	0.46
MBLK	Anthracene			<0.01	ug/L				
MRLHI	Anthracene		0.1	0.103	ug/L	103	(50-150)		
MRLLW	Anthracene		0.02	0.0210	ug/L	105	(50-150)		
MRLMD	Anthracene		0.05	0.0720	ug/L	144	(50-150)		
MS_200907150180	Anthracene		2.0	2.21	ug/L	110	(70-130)		
LCS1	Atrazine		2.0	2.28	ug/L	114	(70-130)		
LCS2	Atrazine		2.0	2.25	ug/L	112	(70-130)	20	1.3
MBLK	Atrazine			<0.025	ug/L				
MRLHI	Atrazine		0.1	0.122	ug/L	122	(50-150)		
MRLMD	Atrazine		0.05	0.0630	ug/L	126	(50-150)		
MS_200907150180	Atrazine	ND	2.0	2.23	ug/L	111	(70-130)		
LCS1	Benz(a)Anthracene		2.0	2.3	ug/L	115	(70-130)		
LCS2	Benz(a)Anthracene		2.0	2.28	ug/L	114	(70-130)	20	0.87
MBLK	Benz(a)Anthracene			<0.025	ug/L				
MRLHI	Benz(a)Anthracene		0.1	0.110	ug/L	110	(50-150)		
MRLMD	Benz(a)Anthracene		0.05	0.0520	ug/L	104	(50-150)		
MS_200907150180	Benz(a)Anthracene		2.0	2.22	ug/L	111	(70-130)		
LCS1	Benzo(a)pyrene		2.0	2.42	ug/L	121	(70-130)		
LCS2	Benzo(a)pyrene		2.0	2.46	ug/L	123	(70-130)	20	2.0
MBLK	Benzo(a)pyrene			<0.01	ug/L				
MRLHI	Benzo(a)pyrene		0.1	0.107	ug/L	107	(50-150)		
MRLLW	Benzo(a)pyrene		0.02	0.0230	ug/L	115	(50-150)		
MRLMD	Benzo(a)pyrene		0.05	0.0510	ug/L	102	(50-150)		
MS_200907150180	Benzo(a)pyrene	ND	2.0	2.35	ug/L	118	(70-130)		
LCS1	Benzo(b)Fluoranthene		2.0	2.28	ug/L	114	(70-130)		
LCS2	Benzo(b)Fluoranthene		2.0	2.33	ug/L	117	(70-130)	20	2.2
MBLK	Benzo(b)Fluoranthene			<0.01	ug/L				
MRLHI	Benzo(b)Fluoranthene		0.1	0.106	ug/L	106	(50-150)		
MRLLW	Benzo(b)Fluoranthene		0.02	0.0200	ug/L	100	(50-150)		
MRLMD	Benzo(b)Fluoranthene		0.05	0.0600	ug/L	120	(50-150)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200907150180	Benzo(b)Fluoranthene		2.0	2.25	ug/L	113	(70-130)		
LCS1	Benzo(g,h,i)Perylene		2.0	2.37	ug/L	119	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2.0	2.45	ug/L	122	(70-130)	20	3.3
MBLK	Benzo(g,h,i)Perylene			<0.025	ug/L				
MRLHI	Benzo(g,h,i)Perylene		0.1	0.0970	ug/L	97	(50-150)		
MRLMD	Benzo(g,h,i)Perylene		0.05	0.0540	ug/L	108	(50-150)		
MS_200907150180	Benzo(g,h,i)Perylene		2.0	2.23	ug/L	111	(70-130)		
LCS1	Benzo(k)Fluoranthene		2.0	2.47	ug/L	123	(70-130)		
LCS2	Benzo(k)Fluoranthene		2.0	2.51	ug/L	126	(70-130)	20	1.6
MBLK	Benzo(k)Fluoranthene			<0.01	ug/L				
MRLHI	Benzo(k)Fluoranthene		0.1	0.105	ug/L	105	(50-150)		
MRLLW	Benzo(k)Fluoranthene		0.02	0.0220	ug/L	110	(50-150)		
MRLMD	Benzo(k)Fluoranthene		0.05	0.0530	ug/L	106	(50-150)		
MS_200907150180	Benzo(k)Fluoranthene		2.0	2.33	ug/L	116	(70-130)		
LCS1	Beta-BHC		2.0	2.3	ug/L	115	(70-130)		
LCS2	Beta-BHC		2.0	2.29	ug/L	115	(70-130)	20	0.44
MBLK	Beta-BHC			<0.05	ug/L				
MRLHI	Beta-BHC		0.1	0.114	ug/L	114	(50-150)		
MS_200907150180	Beta-BHC		2.0	2.27	ug/L	113	(70-130)		
LCS1	Bromacil		2.0	2.25	ug/L	113	(70-130)		
LCS2	Bromacil		2.0	2.24	ug/L	112	(70-130)	20	0.45
MBLK	Bromacil			<0.05	ug/L				
MRLHI	Bromacil		0.1	0.124	ug/L	124	(50-150)		
MS_200907150180	Bromacil		2.0	2.32	ug/L	116	(70-130)		
LCS1	Butachlor		2.0	2.49	ug/L	125	(70-130)		
LCS2	Butachlor		2.0	2.54	ug/L	127	(70-130)	20	2.0
MBLK	Butachlor			<0.025	ug/L				
MRLHI	Butachlor		0.1	0.103	ug/L	103	(50-150)		
MRLMD	Butachlor		0.05	0.0570	ug/L	114	(50-150)		
MS_200907150180	Butachlor		2.0	2.5	ug/L	125	(70-130)		
LCS1	Butylbenzylphthalate		2.0	2.34	ug/L	117	(70-130)		
LCS2	Butylbenzylphthalate		2.0	2.37	ug/L	118	(70-130)	20	1.3
MBLK	Butylbenzylphthalate			<0.15	ug/L				
MRLHI	Butylbenzylphthalate		0.3	0.360	ug/L	120	(50-150)		
MS_200907150180	Butylbenzylphthalate		2.0	2.35	ug/L	118	(70-130)		
LCS1	Caffeine by method 525mod		2.0	1.65	ug/L	82	(45-137)		
LCS2	Caffeine by method 525mod		2.0	1.52	ug/L	76	(45-137)	20	7.5
MBLK	Caffeine by method 525mod			<0.01	ug/L				
MRLHI	Caffeine by method 525mod		0.1	0.0760	ug/L	76	(50-150)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLMD	Caffeine by method 525mod		0.05	0.0380	ug/L	76	(50-150)		
MS_200907150180	Caffeine by method 525mod		2.0	1.67	ug/L	84	(46-144)		
LCS1	Chlorobenzilate		2.0	2.47	ug/L	124	(70-130)		
LCS2	Chlorobenzilate		2.0	2.41	ug/L	121	(70-130)	20	2.5
MBLK	Chlorobenzilate			<0.05	ug/L				
MRLHI	Chlorobenzilate		0.1	0.140	ug/L	140	(50-150)		
MS_200907150180	Chlorobenzilate		2.0	2.5	ug/L	125	(70-130)		
LCS1	Chloroneb		2.0	2.14	ug/L	107	(70-130)		
LCS2	Chloroneb		2.0	2.17	ug/L	108	(70-130)	20	1.4
MBLK	Chloroneb			<0.05	ug/L				
MRLHI	Chloroneb		0.1	0.113	ug/L	113	(50-150)		
MS_200907150180	Chloroneb		2.0	2.1	ug/L	105	(70-130)		
LCS1	Chlorothalonil(Draconil,Bravo)		2.0	2.28	ug/L	114	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2.0	2.25	ug/L	113	(70-130)	20	1.3
MBLK	Chlorothalonil(Draconil,Bravo)			<0.05	ug/L				
MRLHI	Chlorothalonil(Draconil,Bravo)		0.1	0.107	ug/L	107	(50-150)		
MS_200907150180	Chlorothalonil(Draconil,Bravo)		2.0	2.25	ug/L	113	(70-130)		
LCS1	Chlorpyrifos (Dursban)		2.0	2.42	ug/L	121	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2.0	2.4	ug/L	120	(70-130)	20	0.83
MBLK	Chlorpyrifos (Dursban)			<0.025	ug/L				
MRLHI	Chlorpyrifos (Dursban)		0.1	0.132	ug/L	132	(50-150)		
MRLMD	Chlorpyrifos (Dursban)		0.05	0.0640	ug/L	128	(50-150)		
MS_200907150180	Chlorpyrifos (Dursban)		2.0	2.38	ug/L	119	(70-130)		
LCS1	Chrysene		2.0	2.22	ug/L	111	(70-130)		
LCS2	Chrysene		2.0	2.29	ug/L	115	(70-130)	20	3.1
MBLK	Chrysene			<0.01	ug/L				
MRLHI	Chrysene		0.1	0.109	ug/L	109	(50-150)		
MRLLW	Chrysene		0.02	0.0240	ug/L	120	(50-150)		
MRLMD	Chrysene		0.05	0.0590	ug/L	118	(50-150)		
MS_200907150180	Chrysene		2.0	2.22	ug/L	111	(70-130)		
LCS1	Chrysene-d12 (I)			88.9	%	89	(50-150)		
LCS2	Chrysene-d12 (I)			76.3	%	76	(50-150)		
MBLK	Chrysene-d12 (I)			77.8	%	78	(50-150)		
MRLHI	Chrysene-d12 (I)			65.8	%	66	(50-150)		
MRLLW	Chrysene-d12 (I)			76.5	%	77	(50-150)		
MRLMD	Chrysene-d12 (I)			65.4	%	65	(50-150)		
MS_200907150180	Chrysene-d12 (I)			77.1	%	77	(50-150)		
LCS1	Delta-BHC		2.0	2.22	ug/L	111	(70-130)		
LCS2	Delta-BHC		2.0	2.31	ug/L	116	(70-130)	20	4.4

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Delta-BHC			<0.05	ug/L				
MRLHI	Delta-BHC		0.1	0.119	ug/L	119	(50-150)		
MS_200907150180	Delta-BHC		2.0	2.23	ug/L	111	(70-130)		
LCS1	Di(2-Ethylhexyl)phthalate		2.0	2.26	ug/L	113	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2.0	2.31	ug/L	116	(70-130)	20	2.2
MBLK	Di(2-Ethylhexyl)phthalate			<0.15	ug/L				
MRLHI	Di(2-Ethylhexyl)phthalate		0.3	0.372	ug/L	124	(50-150)		
MS_200907150180	Di(2-Ethylhexyl)phthalate	ND	2.0	2.1	ug/L	105	(70-130)		
LCS1	Di-(2-Ethylhexyl)adipate		2.0	2.41	ug/L	121	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2.0	2.39	ug/L	119	(70-130)	20	0.83
MBLK	Di-(2-Ethylhexyl)adipate			<0.15	ug/L				
MRLHI	Di-(2-Ethylhexyl)adipate		0.3	0.366	ug/L	122	(50-150)		
MS_200907150180	Di-(2-Ethylhexyl)adipate	ND	2.0	2.14	ug/L	107	(70-130)		
LCS1	Di-n-Butylphthalate		4.0	4.85	ug/L	121	(70-130)		
LCS2	Di-n-Butylphthalate		4.0	4.87	ug/L	122	(70-130)	20	0.41
MBLK	Di-n-Butylphthalate			<0.15	ug/L				
MRLHI	Di-n-Butylphthalate		0.4	0.461	ug/L	115	(50-150)		
MS_200907150180	Di-n-Butylphthalate		4.0	4.87	ug/L	122	(70-130)		
LCS1	Di-N-octylphthalate		2.0	2.27	ug/L	114	(70-130)		
LCS2	Di-N-octylphthalate		2.0	2.33	ug/L	117	(70-130)	20	2.6
MBLK	Di-N-octylphthalate			<0.05	ug/L				
MRLHI	Di-N-octylphthalate		0.1	0.128	ug/L	128	(50-150)		
MS_200907150180	Di-N-octylphthalate		2.0	2.03	ug/L	101	(70-130)		
LCS1	Diazinon (Qualitative)		2.0	2.24	ug/L	112	(70-130)		
LCS2	Diazinon (Qualitative)		2.0	2.23	ug/L	111	(70-130)	20	0.45
MBLK	Diazinon (Qualitative)			<0.05	ug/L				
MRLHI	Diazinon (Qualitative)		0.1	0.113	ug/L	113	(50-150)		
MS_200907150180	Diazinon (Qualitative)		2.0	2.28	ug/L	114	(70-130)		
LCS1	Dibenz(a,h)Anthracene		2.0	2.42	ug/L	121	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2.0	2.48	ug/L	124	(70-130)	20	2.5
MBLK	Dibenz(a,h)Anthracene			<0.025	ug/L				
MRLHI	Dibenz(a,h)Anthracene		0.1	0.100	ug/L	100	(50-150)		
MRLMD	Dibenz(a,h)Anthracene		0.05	0.0560	ug/L	112	(50-150)		
MS_200907150180	Dibenz(a,h)Anthracene		2.0	2.14	ug/L	107	(70-130)		
LCS1	Dichlorvos (DDVP)		2.0	2.1	ug/L	105	(70-130)		
LCS2	Dichlorvos (DDVP)		2.0	2.02	ug/L	101	(70-130)	20	3.4
MBLK	Dichlorvos (DDVP)			<0.025	ug/L				
MRLHI	Dichlorvos (DDVP)		0.1	0.0900	ug/L	90	(50-150)		
MRLMD	Dichlorvos (DDVP)		0.05	0.0490	ug/L	98	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200907150180	Dichlorvos (DDVP)		2.0	2.15	ug/L	108	(70-130)		
LCS1	Dieldrin		2.0	2.33	ug/L	116	(70-130)		
LCS2	Dieldrin		2.0	2.47	ug/L	123	(70-130)	20	5.8
MBLK	Dieldrin			<0.05	ug/L				
MRLHI	Dieldrin		0.1	0.123	ug/L	123	(50-150)		
MS_200907150180	Dieldrin		2.0	2.33	ug/L	116	(70-130)		
LCS1	Diethylphthalate		2.0	2.3	ug/L	115	(70-130)		
LCS2	Diethylphthalate		2.0	2.32	ug/L	116	(70-130)	20	0.87
MBLK	Diethylphthalate			<0.15	ug/L				
MRLHI	Diethylphthalate		0.3	0.328	ug/L	109	(50-150)		
MS_200907150180	Diethylphthalate		2.0	2.31	ug/L	115	(70-130)		
LCS1	Dimethoate		2.0	1.3	ug/L	65	(35-100)		
LCS2	Dimethoate		2.0	1.28	ug/L	64	(35-100)	20	2.3
MBLK	Dimethoate			<0.05	ug/L				
MRLHI	Dimethoate		0.1	0.0530	ug/L	53	(50-150)		
MS_200907150180	Dimethoate		2.0	1.36	ug/L	68	(34-111)		
LCS1	Dimethylphthalate		2.0	2.24	ug/L	112	(70-130)		
LCS2	Dimethylphthalate		2.0	2.21	ug/L	110	(70-130)	20	1.4
MBLK	Dimethylphthalate			<0.15	ug/L				
MRLHI	Dimethylphthalate		0.3	0.326	ug/L	109	(50-150)		
MS_200907150180	Dimethylphthalate		2.0	2.3	ug/L	115	(70-130)		
LCS1	Endosulfan I (Alpha)		2.0	2.37	ug/L	118	(70-130)		
LCS2	Endosulfan I (Alpha)		2.0	2.16	ug/L	108	(70-130)	20	9.3
MBLK	Endosulfan I (Alpha)			<0.05	ug/L				
MRLHI	Endosulfan I (Alpha)		0.1	0.133	ug/L	133	(50-150)		
MS_200907150180	Endosulfan I (Alpha)		2.0	2.29	ug/L	115	(70-130)		
LCS1	Endosulfan II (Beta)		2.0	2.33	ug/L	117	(70-130)		
LCS2	Endosulfan II (Beta)		2.0	2.31	ug/L	115	(70-130)	20	0.86
MBLK	Endosulfan II (Beta)			<0.05	ug/L				
MRLHI	Endosulfan II (Beta)		0.1	0.140	ug/L	140	(50-150)		
MS_200907150180	Endosulfan II (Beta)		2.0	2.32	ug/L	116	(70-130)		
LCS1	Endosulfan Sulfate		2.0	2.37	ug/L	118	(70-130)		
LCS2	Endosulfan Sulfate		2.0	2.26	ug/L	113	(70-130)	20	4.8
MBLK	Endosulfan Sulfate			<0.05	ug/L				
MRLHI	Endosulfan Sulfate		0.1	0.110	ug/L	110	(50-150)		
MS_200907150180	Endosulfan Sulfate		2.0	2.42	ug/L	121	(70-130)		
LCS1	Endrin		2.0	2.24	ug/L	112	(70-130)		
LCS2	Endrin		2.0	2.2	ug/L	110	(70-130)	20	1.8
MBLK	Endrin			<0.05	ug/L				

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Endrin		0.1	0.131	ug/L	131	(50-150)		
MS_200907150180	Endrin		2.0	2.21	ug/L	111	(70-130)		
LCS1	Endrin Aldehyde		2.0	2.23	ug/L	112	(70-130)		
LCS2	Endrin Aldehyde		2.0	2.42	ug/L	121	(70-130)	20	8.2
MBLK	Endrin Aldehyde			<0.05	ug/L				
MRLHI	Endrin Aldehyde		0.1	0.134	ug/L	134	(50-150)		
MS_200907150180	Endrin Aldehyde		2.0	2.39	ug/L	119	(70-130)		
LCS1	EPTC		2.0	2.16	ug/L	108	(70-130)		
LCS2	EPTC		2.0	2.16	ug/L	108	(70-130)	20	0.0
MBLK	EPTC			<0.05	ug/L				
MRLHI	EPTC		0.1	0.110	ug/L	110	(50-150)		
MS_200907150180	EPTC		2.0	2.17	ug/L	109	(70-130)		
LCS1	Fluoranthene		2.0	2.3	ug/L	115	(70-130)		
LCS2	Fluoranthene		2.0	2.32	ug/L	116	(70-130)	20	0.87
MBLK	Fluoranthene			<0.05	ug/L				
MRLHI	Fluoranthene		0.1	0.104	ug/L	104	(50-150)		
MS_200907150180	Fluoranthene		2.0	2.26	ug/L	113	(70-130)		
LCS1	Fluorene		2.0	2.23	ug/L	111	(70-130)		
LCS2	Fluorene		2.0	2.22	ug/L	111	(70-130)	20	0.45
MBLK	Fluorene			<0.05	ug/L				
MRLHI	Fluorene		0.1	0.103	ug/L	103	(50-150)		
MRLMD	Fluorene		0.05	0.0600	ug/L	120	(50-150)		
MS_200907150180	Fluorene		2.0	2.2	ug/L	110	(70-130)		
LCS1	gamma-Chlordane		2.0	2.29	ug/L	115	(70-130)		
LCS2	gamma-Chlordane		2.0	2.27	ug/L	114	(70-130)	20	1.3
MBLK	gamma-Chlordane			<0.025	ug/L				
MRLHI	gamma-Chlordane		0.1	0.120	ug/L	120	(50-150)		
MRLMD	gamma-Chlordane		0.05	0.0650	ug/L	130	(50-150)		
MS_200907150180	gamma-Chlordane		2.0	2.25	ug/L	113	(70-130)		
LCS1	Heptachlor		2.0	2.21	ug/L	111	(70-130)		
LCS2	Heptachlor		2.0	2.26	ug/L	113	(70-130)	20	2.2
MBLK	Heptachlor			<0.015	ug/L				
MRLHI	Heptachlor		0.1	0.125	ug/L	125	(50-150)		
MRLLW	Heptachlor		0.02	0.0230	ug/L	115	(50-150)		
MRLMD	Heptachlor		0.05	0.0550	ug/L	110	(50-150)		
MS_200907150180	Heptachlor		2.0	2.23	ug/L	112	(70-130)		
LCS1	Heptachlor Epoxide (isomer B)		2.0	2.27	ug/L	114	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2.0	2.35	ug/L	117	(70-130)	20	3.5
MBLK	Heptachlor Epoxide (isomer B)			<0.025	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Heptachlor Epoxide (isomer B)		0.1	0.105	ug/L	105	(50-150)		
MRLMD	Heptachlor Epoxide (isomer B)		0.05	0.0580	ug/L	116	(50-150)		
MS_200907150180	Heptachlor Epoxide (isomer B)		2.0	2.28	ug/L	114	(70-130)		
LCS1	Hexachlorobenzene		2.0	2.15	ug/L	107	(70-130)		
LCS2	Hexachlorobenzene		2.0	2.17	ug/L	108	(70-130)	20	0.93
MBLK	Hexachlorobenzene			<0.025	ug/L				
MRLHI	Hexachlorobenzene		0.3	0.319	ug/L	106	(50-150)		
MRLLW	Hexachlorobenzene		0.06	0.0600	ug/L	100	(50-150)		
MRLMD	Hexachlorobenzene		0.15	0.175	ug/L	117	(50-150)		
MS_200907150180	Hexachlorobenzene	ND	2.0	2.13	ug/L	107	(70-130)		
LCS1	Hexachlorocyclopentadiene		2.0	1.91	ug/L	96	(70-130)		
LCS2	Hexachlorocyclopentadiene		2.0	1.92	ug/L	96	(70-130)	20	0.52
MBLK	Hexachlorocyclopentadiene			<0.025	ug/L				
MRLHI	Hexachlorocyclopentadiene		0.3	0.232	ug/L	77	(50-150)		
MRLLW	Hexachlorocyclopentadiene		0.06	0.0480	ug/L	80	(50-150)		
MRLMD	Hexachlorocyclopentadiene		0.15	0.118	ug/L	79	(50-150)		
MS_200907150180	Hexachlorocyclopentadiene	ND	2.0	1.92	ug/L	96	(70-130)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2.0	2.44	ug/L	122	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2.0	2.5	ug/L	125	(70-130)	20	2.4
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.025	ug/L				
MRLHI	Indeno(1,2,3,c,d)Pyrene		0.1	0.100	ug/L	100	(50-150)		
MRLMD	Indeno(1,2,3,c,d)Pyrene		0.05	0.0570	ug/L	114	(50-150)		
MS_200907150180	Indeno(1,2,3,c,d)Pyrene		2.0	2.23	ug/L	112	(70-130)		
LCS1	Isophorone		2.0	2.01	ug/L	100	(70-130)		
LCS2	Isophorone		2.0	2.01	ug/L	101	(70-130)	20	0.0
MBLK	Isophorone			<0.25	ug/L				
MRLHI	Isophorone		0.1	0.123	ug/L	123	(50-150)		
MS_200907150180	Isophorone		2.0	2.05	ug/L	103	(70-130)		
LCS1	Lindane		2.0	2.27	ug/L	114	(70-130)		
LCS2	Lindane		2.0	2.29	ug/L	115	(70-130)	20	0.88
MBLK	Lindane			<0.02	ug/L				
MRLHI	Lindane		0.1	0.125	ug/L	125	(50-150)		
MRLLW	Lindane		0.02	0.0260	ug/L	130	(50-150)		
MRLMD	Lindane		0.05	0.0630	ug/L	126	(50-150)		
MS_200907150180	Lindane		2.0	2.25	ug/L	112	(70-130)		
LCS1	Malathion		2.0	2.26	ug/L	113	(70-130)		
LCS2	Malathion		2.0	2.32	ug/L	116	(70-130)	20	2.6
MBLK	Malathion			<0.05	ug/L				
MRLHI	Malathion		0.1	0.117	ug/L	117	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200907150180	Malathion		2.0	2.37	ug/L	118	(70-130)		
LCS1	Methoxychlor		2.0	2.21	ug/L	110	(70-130)		
LCS2	Methoxychlor		2.0	2.25	ug/L	113	(70-130)	20	1.8
MBLK	Methoxychlor			<0.05	ug/L				
MRLHI	Methoxychlor		0.1	0.0860	ug/L	86	(50-150)		
MS_200907150180	Methoxychlor		2.0	2.4	ug/L	120	(70-130)		
LCS1	Metolachlor		2.0	2.35	ug/L	117	(70-130)		
LCS2	Metolachlor		2.0	2.34	ug/L	117	(70-130)	20	0.43
MBLK	Metolachlor			<0.025	ug/L				
MRLHI	Metolachlor		0.1	0.107	ug/L	107	(50-150)		
MRLMD	Metolachlor		0.05	0.0560	ug/L	112	(50-150)		
MS_200907150180	Metolachlor		2.0	2.36	ug/L	118	(70-130)		
LCS1	Metribuzin		2.0	2.41	ug/L	120	(70-130)		
LCS2	Metribuzin		2.0	2.24	ug/L	112	(70-130)	20	7.3
MBLK	Metribuzin			<0.05	ug/L				
MRLHI	Metribuzin		0.1	0.100	ug/L	100	(50-150)		
MRLMD	Metribuzin		0.05	0.0480	ug/L	96	(50-150)		
MS_200907150180	Metribuzin		2.0	2.44	ug/L	122	(70-130)		
LCS1	Molinate		2.0	2.26	ug/L	113	(70-130)		
LCS2	Molinate		2.0	2.28	ug/L	114	(70-130)	20	0.88
MBLK	Molinate			<0.05	ug/L				
MRLHI	Molinate		0.1	0.105	ug/L	105	(50-150)		
MS_200907150180	Molinate	ND	2.0	2.22	ug/L	111	(70-130)		
LCS1	Naphthalene		2.0	2.02	ug/L	101	(70-130)		
LCS2	Naphthalene		2.0	2.07	ug/L	104	(70-130)	20	2.4
MBLK	Naphthalene			<0.05	ug/L				
MRLHI	Naphthalene		0.1	0.116	ug/L	116	(50-150)		
MS_200907150180	Naphthalene		2.0	2.1	ug/L	105	(70-130)		
LCS1	Parathion		2.0	2.32	ug/L	116	(70-130)		
LCS2	Parathion		2.0	2.21	ug/L	111	(70-130)	20	4.9
MBLK	Parathion			<0.05	ug/L				
MRLHI	Parathion		0.1	0.103	ug/L	103	(50-150)		
MS_200907150180	Parathion		2.0	2.3	ug/L	115	(70-130)		
LCS1	Pendimethalin		2.0	2.36	ug/L	118	(70-130)		
LCS2	Pendimethalin		2.0	2.35	ug/L	117	(70-130)	20	0.43
MBLK	Pendimethalin			<0.05	ug/L				
MRLHI	Pendimethalin		0.1	0.125	ug/L	125	(50-150)		
MS_200907150180	Pendimethalin		2.0	2.37	ug/L	118	(70-130)		
LCS1	Pentachlorophenol		8.0	8.45	ug/L	106	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Pentachlorophenol		8.0	8.43	ug/L	105	(70-130)	20	0.24
MBLK	Pentachlorophenol			<0.6	ug/L				
MRLHI	Pentachlorophenol		1.2	1.33	ug/L	111	(50-150)		
MS_200907150180	Pentachlorophenol		8.0	8.41	ug/L	105	(70-130)		
LCS1	Permethrin (mixed isomers)		4.0	4.45	ug/L	111	(70-130)		
LCS2	Permethrin (mixed isomers)		4.0	4.71	ug/L	118	(70-130)	20	5.7
MBLK	Permethrin (mixed isomers)			<0.1	ug/L				
MRLHI	Permethrin (mixed isomers)		0.2	0.236	ug/L	118	(50-150)		
MS_200907150180	Permethrin (mixed isomers)		4.0	4.26	ug/L	106	(70-130)		
LCS1	Perylene-d12 (S)			96.5	%	97	(70-130)		
LCS2	Perylene-d12 (S)			89.3	%	89	(70-130)		
MBLK	Perylene-d12 (S)			78.5	%	79	(70-130)		
MRLHI	Perylene-d12 (S)			74.1	%	74	(70-130)		
MRLLW	Perylene-d12 (S)			76.4	%	76	(70-130)		
MRLMD	Perylene-d12 (S)			71.8	%	72	(70-130)		
MS_200907150180	Perylene-d12 (S)			89.5	%	90	(70-130)		
LCS1	Phenanthrene		2.0	2.18	ug/L	109	(70-130)		
LCS2	Phenanthrene		2.0	2.2	ug/L	110	(70-130)	20	0.91
MBLK	Phenanthrene			<0.02	ug/L				
MRLHI	Phenanthrene		0.1	0.116	ug/L	116	(50-150)		
MRLLW	Phenanthrene		0.02	0.0260	ug/L	130	(50-150)		
MRLMD	Phenanthrene		0.05	0.0560	ug/L	112	(50-150)		
MS_200907150180	Phenanthrene		2.0	2.18	ug/L	109	(70-130)		
LCS1	Phenanthrene-d10 (I)			80.5	%	81	(50-150)		
LCS2	Phenanthrene-d10 (I)			73.2	%	73	(50-150)		
MBLK	Phenanthrene-d10 (I)			79.6	%	80	(50-150)		
MRLHI	Phenanthrene-d10 (I)			71.3	%	71	(50-150)		
MRLLW	Phenanthrene-d10 (I)			80.5	%	81	(50-150)		
MRLMD	Phenanthrene-d10 (I)			69.4	%	69	(50-150)		
MS_200907150180	Phenanthrene-d10 (I)			73.5	%	74	(50-150)		
LCS1	Propachlor		2.0	2.2	ug/L	110	(70-130)		
LCS2	Propachlor		2.0	2.25	ug/L	113	(70-130)	20	2.7
MBLK	Propachlor			<0.025	ug/L				
MRLHI	Propachlor		0.1	0.129	ug/L	129	(50-150)		
MRLMD	Propachlor		0.05	0.0580	ug/L	116	(50-150)		
MS_200907150180	Propachlor		2.0	2.16	ug/L	108	(70-130)		
LCS1	Pyrene		2.0	2.29	ug/L	115	(70-130)		
LCS2	Pyrene		2.0	2.32	ug/L	116	(70-130)	20	1.3
MBLK	Pyrene			<0.025	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Pyrene		0.1	0.106	ug/L	106	(50-150)		
MRLMD	Pyrene		0.05	0.0610	ug/L	122	(50-150)		
MS_200907150180	Pyrene		2.0	2.33	ug/L	117	(70-130)		
LCS1	Simazine		2.0	2.24	ug/L	112	(70-130)		
LCS2	Simazine		2.0	2.22	ug/L	111	(70-130)	20	0.90
MBLK	Simazine			<0.025	ug/L				
MRLHI	Simazine		0.1	0.110	ug/L	110	(50-150)		
MRLMD	Simazine		0.05	0.0610	ug/L	122	(50-150)		
MS_200907150180	Simazine	ND	2.0	2.28	ug/L	114	(70-130)		
LCS1	Terbacil		2.0	2.11	ug/L	106	(70-130)		
LCS2	Terbacil		2.0	2.13	ug/L	106	(70-130)	20	0.94
MBLK	Terbacil			<0.05	ug/L				
MRLHI	Terbacil		0.1	0.128	ug/L	128	(50-150)		
MS_200907150180	Terbacil		2.0	2.19	ug/L	110	(70-130)		
LCS1	Terbuthylazine		2.0	2.39	ug/L	119	(70-130)		
LCS2	Terbuthylazine		2.0	2.47	ug/L	124	(70-130)	20	3.3
MBLK	Terbuthylazine			<0.2	ug/L				
MRLHI	Terbuthylazine		0.1	0.108	ug/L	108	(50-150)		
MS_200907150180	Terbuthylazine		2.0	2.37	ug/L	119	(70-130)		
LCS1	Thiobencarb		2.0	2.34	ug/L	117	(70-130)		
LCS2	Thiobencarb		2.0	2.32	ug/L	116	(70-130)	20	0.86
MBLK	Thiobencarb			<0.1	ug/L				
MRLHI	Thiobencarb		0.1	0.106	ug/L	106	(50-150)		
MS_200907150180	Thiobencarb	ND	2.0	2.33	ug/L	117	(70-130)		
LCS1	trans-Nonachlor		2.0	2.25	ug/L	112	(70-130)		
LCS2	trans-Nonachlor		2.0	2.34	ug/L	117	(70-130)	20	3.9
MBLK	trans-Nonachlor			<0.025	ug/L				
MRLHI	trans-Nonachlor		0.1	0.120	ug/L	120	(50-150)		
MRLMD	trans-Nonachlor		0.05	0.0550	ug/L	110	(50-150)		
MS_200907150180	trans-Nonachlor		2.0	2.31	ug/L	115	(70-130)		
LCS1	Trifluralin		2.0	2.26	ug/L	113	(70-130)		
LCS2	Trifluralin		2.0	2.21	ug/L	110	(70-130)	20	2.2
MBLK	Trifluralin			<0.05	ug/L				
MRLHI	Trifluralin		0.1	0.147	ug/L	147	(50-150)		
MS_200907150180	Trifluralin		2.0	2.29	ug/L	114	(70-130)		
LCS1	Triphenylphosphate (S)			111	%	111	(70-130)		
LCS2	Triphenylphosphate (S)			109	%	109	(70-130)		
MBLK	Triphenylphosphate (S)			107	%	107	(70-130)		
MRLHI	Triphenylphosphate (S)			104	%	104	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLLW	Triphenylphosphate (S)			103	%	103	(70-130)		
MRLMD	Triphenylphosphate (S)			97.6	%	98	(70-130)		
MS_200907150180	Triphenylphosphate (S)			110	%	110	(70-130)		
QC Ref# 518675 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 08/03/2009**			
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	1.74	ng/l	87	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	40.0	ng/l	100	(70-130)		
CCCL	NDMA-D6 (S)			89.6	%	90	(70-130)		
CCCM	NDMA-D6 (S)			90.0	%	90	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

07/22/2009

Henry Barrientos
Groundwater Management Unit
Water Supply Management Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Henry Barrientos,

This transmits the analytical results for the Laboratory services that you requested. The data contained herein are supported by the Laboratory Services Unit's Quality Assurance/Quality Control Program.

The analytical results, quality control information, and sample handling observations have been reviewed for both completeness and accuracy, with any exceptions noted.

Laboratory Analyst(s)

James N. Scott
Laboratory Manager

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

Lab No. 200907130432

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E08D012 / MW-1**	**Unknown**	**91041015-0000**	**07/13/2009**	**0:00**	**Thomas M.**

Batch: 57292

Prep Date: Analysis Date: 09/14/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.22	mg/L		

Lab No. 200907130433

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E08D011 / MW-2**	**Unknown**	**91041015-0000**	**07/13/2009**	**0:00**	**Thomas M.**

Batch: 57292

Prep Date: Analysis Date: 09/14/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.11	mg/L		

Lab No. 200907130434

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E07A014 / MW-3**	**Unknown**	**91041015-0000**	**07/13/2009**	**0:00**	**Thomas M.**

Batch: 57292

Prep Date: Analysis Date: 09/14/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.22	mg/L		

Lab No. 200907130435

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E07A015 / MW-4**	**Unknown**	**91041015-0000**	**07/13/2009**	**0:00**	**Thomas M.**

Batch: 57292

Prep Date: Analysis Date: 09/14/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.22	mg/L		

Lab No. 200907130436

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**L5 COMP**	**Unknown**	**91041015-0000**	**07/13/2009**	**0:00**	**Thomas M.**

Batch: 57292

Prep Date: Analysis Date: 09/14/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.21	mg/L		

Lab No. 200907130437

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**L10 COMP**	**Unknown**	**91041015-0000**	**07/13/2009**	**0:00**	**Thomas M.**

Batch: 57292

Prep Date: Analysis Date: 09/14/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.23	mg/L		

Lab No. 200907130438

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**SOURCE**	**Unknown**	**91041015-0000**	**07/13/2009**	**0:00**	**Thomas M.**

Batch: 57292

Prep Date: Analysis Date: 09/14/2009 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.25	mg/L		

Lab No. 200907130439

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**4931**	**Unknown**	**91041015-0000**	**07/13/2009**	**0:00**	**Thomas M.**

Batch: 57292

Prep Date:	Analysis Date: 09/14/2009 Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
			Bromide	<0.05	mg/L		

Lab No. 200907130440

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**4932**	**Unknown**	**91041015-0000**	**07/13/2009**	**0:00**	**Thomas M.**

Batch: 57292

Prep Date:	Analysis Date: 09/14/2009 Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
			Bromide	0.25	mg/L		

Legend:

DLR = Detection Limit For Reporting
ND = Not Detected At Or Above The DLR
NT = Not Tested
NR = Not Reported

ABS = Centimeters $^{-1}$
Cells/ml = Cells Per Milliliter
CFU/100 ml = Colony Forming Units Per 100 Milliliters
CFU/ml = Colony Forming Units Per Milliliter
cysts/L = Cysts Per Liter
Deg. C = Degrees Centigrade
mg/L = Milligrams Per Liter
MPN/100ml = Most Probable Number Per 100 Milliliters
ng/L = Nanograms Per Liter

NTU = Nephelometric Turbidity Units
oocysts/L = Oocysts Per Liter
P/A 100ml = Presence/Absence Per 100 Milliliters
pCi/L = Picocuries Per Liter
Rhod-Eqiv = Rhodamine Equivalents
T.O.N. = Threshold Odor Number
ug C/L = Micrograms Carbon Per Liter
ug/L = Micrograms Per Liter
umhos= Microhms

Data Qualifier Definitions:

A = Results may be biased high.
B = Results may be biased low.
D = Analyte is present in method blank.

E = Analyte confirmation on secondary column.
G = Sample hold time exceeded.
H = Presence verified but not quantified.
I = Sample unpreserved or improperly preserved.

J = Estimated result; value may not be accurate.
K = Too numerous to count; value represents filtration volume.
L = Matrix interference(s).
M = Field blanks not prepared at customer's request.

Batch: 57292

QC Code	Test Name		Reported Value	Units	Flag		Acceptance Range	RPD	Flag	RPD Limit
LFB	Bromide	Spike Amount: 1	1.00	mg/L		%Rec: 100	90 - 110			
LFM	Bromide	Spike Amount: 1	1.19	mg/L		%Rec: 97	90 - 110			
LFM D	Bromide	Spike Amount: 1	1.20	mg/L		%Rec: 98	90 - 110	0.8		15
QCS R	Bromide	1	0.99	mg/L		%Rec: 99	90 - 110			
LFB	Phosphate	Spike Amount: 2	1.97	mg/L		%Rec: 98.5	90 - 110			
LFM	Phosphate	Spike Amount: 1	1.74	mg/L		%Rec: 92	90 - 110			
LFM	Phosphate	Spike Amount: 1	1.87	mg/L		%Rec: 91	90 - 110			
LFM D	Phosphate	Spike Amount: 1	1.75	mg/L		%Rec: 93	90 - 110	0.6		15
LFM D	Phosphate	Spike Amount: 1	1.86	mg/L		%Rec: 90	90 - 110	0.5		15
QCS R	Phosphate	1	1.00	mg/L		%Rec: 100	90 - 110			

Report Notes:

QCS, spike recovery, and RPD values that are outside of established limits are underlined.

If an LFM recovery exceeds the established limits for any analyte, and the laboratory performance for other QC parameters is shown to be in control for that analyte, then failure is not system related but due to matrix interferences and is labeled as suspect.

Reported values that are flagged "H" are above the established acceptance range; reported values that are flagged "L" are below the acceptance range. RPD results flagge "H" are above the established RPD limit.-

Quality control sample (LFB, LFM, LFM D, QCS, QCS R, and Surrogate) reporting frequency is based on the method requirement (e.g., a QCS may not be run with every batch).

Legend:

LFB = Laboratory Fortified Blank: An aliquot of a Laboratroty Reagent Blank (LRB) to which known quantities of the method analytes are added in the laboratory. The LFB i analyzed exactly like a sample.

LFB D = Laboratory Fortified Blank Duplicate: A duplicate aliquot of an LRB to which known quantities of the method analytes are added in the laboratory. The LFB D is analyzed exactly like a sample.

LFM = Laboratory Fortified Matrix: An aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM is analyze exactly like a sample.

LFM D = Laboratory Fortified Matrix Duplicate: A duplicate aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory The LFM D is analyzed exactly like a sample.

QCS = Quality Control Sample: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS is obtained fron a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified concentration range.

QCS R = Quality Control Sample Recovery: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS R i obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified recovery range.

RPD = Relative Percent Difference

SUR = Surrogate. An organic compound that is similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis.

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
08/14/2009
MWH LABORATORIES

ACCREDITED IN ACCORDANCE WITH nelac
01114CA

Report#: 311192
Project:
RECYCLED-WATER-STUDY
Group: Chemistry
PO#: 30-12408

RCZ: Rick Zimmer

Project Manager

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH Laboratories

750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 311192
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Rick Zimmer
Phone: 626-386-1157
PO #: 30-12408

The following samples were received from you on **August 04, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Sample Date
200908040704	L-5 Composite	03-Aug-2009 08:30
	@NDMA_SPE	

Test Description
@NDMA_SPE -- Nitrosamines by GCMS

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

6°

ENTERED 311192 RSR

SERIAL NO. 14497

PROJECT NAME SCVWD Recycled Water Study

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLERS MURPHY (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
[✓ B.] Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
F. Other ________

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ________

ANALYTICAL LAB MWH

LABORATORY USE ONLY

LAB PROJECT NO. ________

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED															
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	Thio	Field Filtered (check)	NDMA									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	8/3/09	COMP	L-5 COMP	—	—	—	B	A				1		X									1		✓				
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

3/7

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy		8-4-09	1:50
		8-5-09	8:50 am

Container Sealed with Custody Seal: Yes ☐ No ☑

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
LAB PICKUP	COOLER	NONE		8-4-09				

Send Lab Results to (Name): NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739

☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101

☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ________________ TEL ________ FAX ________

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 311192

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
08/04/2009

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL

SUMMARY OF POSITIVE DATA ONLY

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 311192

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
08/04/2009

L-5 Composite (200908040704) **Sampled on 08/03/2009 08:30**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
8/6/2009	08/07/2009	15:43	519511	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
8/6/2009	08/07/2009	15:43	519511	(EPA 521)	NDMA-D6	87	%		1

Rounding on totals after summation.
(c) - indicates calculated results

QC Ref # 519511 - Nitrosamines by GCMS **Analysis Date: 08/07/2009**

200908040704 L-5 Composite Analyzed by: KAM

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
QC Report: 311192

Locus Technologies

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 519511 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 08/07/2009**			
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	1.43	ng/l	71	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	42.2	ng/l	105	(70-130)		
LCS1	N-Nitroso dimethylamine (NDMA)		40	37.2	ng/l	93	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/l				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	1.95	ng/l	97	(50-150)		
MS1_200908041137	N-Nitroso dimethylamine (NDMA)	11	2.0	12.0	ng/l	67	(50-150)		
CCCL	NDMA-D6 (S)			74.7	%	75	(70-130)		
CCCM	NDMA-D6 (S)			95.7	%	96	(70-130)		
LCS1	NDMA-D6 (S)			88.5	%	89	(70-130)		
MBLK	NDMA-D6 (S)			76.9	%	77	(70-130)		
MRL_CHK	NDMA-D6 (S)			91.8	%	92	(70-130)		
MS1_200908041137	NDMA-D6 (S)			82.1	%	82	(70-130)		
QC Ref# 519558 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 08/10/2009**			
MSD1_200908041137	N-Nitroso dimethylamine (NDMA)	11	2.0	12.0	ng/l	67	(50-150)	20	0.90
MSD1_200908041137	NDMA-D6 (S)			86.0	%	86	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Sample Event 6
9/28/2009

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 215257
ANALYTICAL REPORT

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

Project : 27011-07-4200
Location : Recycled Water Study
Level : II

Sample ID	Lab ID
MW-1	215257-001
MW-2	215257-002
MW-3	215257-003
MW-4	215257-004
SOURCE	215257-005
L5-COMP	215257-006
L10-COMP	215257-007

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: ______________________
Project Manager

Date: 10/20/2009

NELAP # 01107CA

CASE NARRATIVE

Laboratory number:	**215257**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**09/28/09**
Samples Received:	**09/28/09**

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 09/28/09. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

Metals (EPA 6010B):
High recovery was observed for calcium in the MS for batch 155519; the parent sample was not a project sample, the BS/BSD were within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Ion Chromatography (EPA 300.0):
No analytical problems were encountered.

Total Cyanide (SM4500CN-E):
No analytical problems were encountered.

Alkalinity (SM2320B):
No analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):
No analytical problems were encountered.

Total Phosphorous (SM4500P-E):
High recoveries were observed for phosphorous in the MS/MSD for batch 155735; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. No other analytical problems were encountered.

Total Organic Carbon (TOC) (SM5310C):
No analytical problems were encountered.

Dissolved Organic Carbon (DOC) (SM5310C):
Low recoveries were observed for dissolved organic carbon in the MS/MSD for batch 155716; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits. The results for sample L5-comp (Lab # 215257-006) had an RSD greater than 10%. No sample remains to re-analyze. Data was qualified with a b. No other analytical problems were encountered.

CASE NARRATIVE

Laboratory number: **215257**
Client: **Locus Technologies**
Project: **27011-07-4200**
Location: **Recycled Water Study**
Request Date: **09/28/09**
Samples Received: **09/28/09**

Surfactants (MBAS) (SM5540C):
No analytical problems were encountered.

EPA 552 (EPA 552):
Columbia Analytical Services in Kelso, WA performed the analysis. Please see the Columbia Analytical Services case narrative.

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14512

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- (A) 40-ml VOA Vial
- (B) Glass Liter
- (C) Plastic 500-ml
- (D) Plastic Liter
- (E) ~~Brass Tube~~ 250 Poly
- (F) Other ~~500ml~~ 250 Glass

SAMPLE DESCRIPTION CODES
- (A) Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other ________

TAT CODES
- (1) Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 215257

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4/H_3PO_4	Field Filtered (check)	See Note 1	See Note 2	TOC/DOC	TDS	8010/8020	HAA6 Full List	Total Phosphates			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1	9-28-09	900	MW-1	14.4	876	6.40	D	A	1					X									1		✓				
	2							C	A		1					X								1		✓				
	3							F	A				✓				X							1		✓				
	4							E	A	1								X						1		✓				
	5							A	A			3							X					1		✓	✓			
	6							B	A	1										X				1		✓				
	7							E	A				1								X			1		✓				
2	8		1050	MW-2	17.3	745	6.72	D	A	1					X									1		✓				
	9							C	A		1					X								1		✓				
	10							F	A				✓				X							1		✓				
	11							E	A	1								X						1		✓				
	12							A	A			3							X					1		✓	✓			
	13							B	A	1										X				1		✓				
	14							E	A				1								X			1		✓				
	15																													
	16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14513, 14, 15	Thomas Murphy	9/28/09	1400		9/28/09	1400

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______________________________ TEL ____________ FAX ____________

REV. 6/02

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LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14513

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)

SAMPLERS Henry Castcotz (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 Poly
[✓ F.] Other 250 Amberglass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 215257

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCl	H_2SO_4/H_3PO_4	Field Filtered (check)	See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6 Full List	Total Phosphates			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
3	1	92809	1155	MW-3	160	963	641	D	A	1					X									1		✓				
	2							C	A		1					X								1		✓				
	3							F	A				✓				X							1		✓				
	4							E	A	1								X						1		✓				
	5							A	A			3							X					1		✓	✓			
	6							B	A	1										X				1		✓				
	7							E	A				1								X			1		✓				
4	8		945	MW-4	15.8	879	6.61	D	A	1					X									1		✓				
	9							C	A		1					X								1		✓				
	10							F	A				✓				X							1		✓				
	11							E	A	1								X						1		✓				
	12							A	A			3							X					1		✓	✓			
	13							B	A	1										X				1		✓				
	14							E	A				1								X			1		✓				
	15																													
	16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14512, 14, 15	Thomas Murphy	9/28/09	1400		9/28/09	1400

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ OTHER ____________ TEL ________ FAX ________

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14514

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
[✓ A] 40-ml VOA Vial [✓ B] Glass Liter [✓ C] Plastic 500-ml [✓ D] Plastic Liter [✓ E] ~~Brass Tube~~ 250 poly [✓ F] Other 250 Amber glass	[✓ A.] Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment F. Oil G. Waste [✓ H.] Blank/Spike I. Other	[✓ 1.] Standard 2. 48 Hour 3. 24 Hour 4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 215257

5

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HN0₃	HCL	H2SO4/H3PO4	~~Field Filtered (check)~~ NaOH	See Note 1	See Note 2	TOC DOC	TDS	Po10/8020	HAA6 Full List	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	9-28-09	1000	Source	21.5	1226	7.94	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				✓				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8	↓	↓	↓	↓	↓	↓	D	A	1												X		1		✓				
9	↓	↓	↓	↓	↓	↓	C	A					1									X	1		✓				
10		—	Temp Blank	—	—	—	A	H	1															*	✓	N/A	*		
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.

Field / Container Temp. 4°C

* Temp TO BE Measured & rec. upon reciept of samples at lab
2.6 9/28/09 1800 C.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14512, 13, 15	Thomas Murphy	9/28/09	1400		9/28/09	1400

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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REV. 6/02

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14515

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLERS Henry Castro Jr (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
[✓ A.] 40-ml VOA Vial B. Glass Liter [✓ C.] Plastic 500-ml D. Plastic Liter [✓ E.] ~~Brass Tube~~ 250 Amber glass [✓ F.] Other 250ml poly	[✓ A.] Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment F. Oil G. Waste H. Blank/Spike I. Other	[✓ 1.] Standard 2. 48 Hour 3. 24 Hour 4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 215257

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO3	HCL	H2SO4/H3PO4	Field Filtered (check)	ANALYSIS REQUESTED: See Note 1	See Note 2	TOC	DOC	TDS	8010/8030	HAA6 full list	Total Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
6	1	9-28-09	comp	L5-Comp	21.4	2045	7.28	C	A	1					X									1		✓				
	2							F	A		1					X								1		✓				
	3							E	A				✓				X							1		✓				
	4							E	A				✓					X						1		✓				
	5							F	A	1									X					1		✓				
	6							A	A			2								X				1		✓	✓			
	7							E	A	1											X			1		✓				
	8							F	A				✓									X		1		✓				
7	9			L10-Comp	21.2	1565	7.40	C	A	1					X									1		✓				
	10							F	A		1					X								1		✓				
	11							E	A				✓				X							1		✓				
	12							E	A				✓					X						1		✓				
	13							F	A	1									X					1		✓				
	14							A	A			2								X				1		✓	✓			
	15							E	A	1											X			1		✓				
	16							F	A		1											X		1		✓				

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.

2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14512,13,14		9/28/09	1400		9/28/09	1400

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

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☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 215257 Date Received 9/28/09 Number of coolers 3

Client LOCUS Project RECYCLED WATER STUDY

Date Opened 9/28/09 By (print) M VILLANUEVE (sign)

Date Logged in ✓ By (print) ✓ (sign) ✓

1. Did cooler come with a shipping slip (airbill, etc) YES [✓ NO]

   Shipping info

2A. Were custody seals present? ... ☒ YES (circle) [✓ on cooler] on samples ☐ NO

   How many 3 Name TONY MURPHY Date 9/28/09

2B. Were custody seals intact upon arrival? [✓ YES] NO N/A

3. Were custody papers dry and intact when received? [✓ YES] NO

4. Were custody papers filled out properly (ink, signed, etc)? [✓ YES] NO

5. Is the project identifiable from custody papers? (If so fill out top of form) [✓ YES] NO

6. Indicate the packing in cooler: (if other, describe)

   ☒ Bubble Wrap ☐ Foam blocks ☐ Bags ☐ None

   ☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

   Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 2.6 9/28/09 1000 MV

   ☐ Samples Received on ice & cold without a temperature blank ONLY 1 COOLER W/ TEMP BLANK

   ☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES [✓ NO]

   If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? [✓ YES] NO

10. Are samples in the appropriate containers for indicated tests? [✓ YES] NO

11. Are sample labels present, in good condition and complete? [✓ YES] NO

12. Do the sample labels agree with custody papers? [✓ YES] NO

13. Was sufficient amount of sample sent for tests requested? [✓ YES] NO

14. Are the samples appropriately preserved? [✓ YES] NO N/A

15. Are bubbles > 6mm absent in VOA samples? [✓ YES] NO N/A

16. Was the client contacted concerning this sample delivery? YES NO

    If YES, Who was called? By Date:

COMMENTS

SAMPLE # 6 & 7 LIMITED SAMPLES

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1

Rev. 6 Number 1 of 3
Effective: 23 July 2008
Z:\qc\forms\checklists\Cooler Receipt Checklist_rv6.doc

Purgeable Halocarbons by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	155638
Lab ID:	215257-001	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/04/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	2.4	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	122	75-137
Toluene-d8	104	80-120
Bromofluorobenzene	108	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	155638
Lab ID:	215257-001	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/04/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	122	75-137
Toluene-d8	104	80-120
Bromofluorobenzene	108	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	155638
Lab ID:	215257-002	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	122	75-137
Toluene-d8	106	80-120
Bromofluorobenzene	112	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	155638
Lab ID:	215257-002	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	122	75-137
Toluene-d8	106	80-120
Bromofluorobenzene	112	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	155638
Lab ID:	215257-003	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	123	75-137
Toluene-d8	105	80-120
Bromofluorobenzene	109	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	155638
Lab ID:	215257-003	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	123	75-137
Toluene-d8	105	80-120
Bromofluorobenzene	109	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	155638
Lab ID:	215257-004	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	124	75-137
Toluene-d8	105	80-120
Bromofluorobenzene	108	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	155638
Lab ID:	215257-004	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	124	75-137
Toluene-d8	105	80-120
Bromofluorobenzene	108	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	155638
Lab ID:	215257-005	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	23	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	27	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	14	0.5
Chlorobenzene	ND	0.5
Bromoform	2.9	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	123	75-137
Toluene-d8	106	80-120
Bromofluorobenzene	107	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	155638
Lab ID:	215257-005	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	123	75-137
Toluene-d8	106	80-120
Bromofluorobenzene	107	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L5-COMP	Batch#:	155638
Lab ID:	215257-006	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	1.1	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	0.7	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	0.8	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	122	75-137
Toluene-d8	107	80-120
Bromofluorobenzene	109	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L5-COMP	Batch#:	155638
Lab ID:	215257-006	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	122	75-137
Toluene-d8	107	80-120
Bromofluorobenzene	109	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L10-COMP	Batch#:	155638
Lab ID:	215257-007	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	1.7	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	0.7	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	0.7	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	123	75-137
Toluene-d8	107	80-120
Bromofluorobenzene	108	80-123

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L10-COMP	Batch#:	155638
Lab ID:	215257-007	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Analyzed:	10/05/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	123	75-137
Toluene-d8	107	80-120
Bromofluorobenzene	108	80-123

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC515030	Batch#:	155638
Matrix:	Water	Analyzed:	10/04/09
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	1.0
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	120	75-137
Toluene-d8	104	80-120
Bromofluorobenzene	108	80-123

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC515030	Batch#:	155638
Matrix:	Water	Analyzed:	10/04/09
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	120	75-137
Toluene-d8	104	80-120
Bromofluorobenzene	108	80-123

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	155638
Units:	ug/L	Analyzed:	10/04/09
Diln Fac:	1.000		

Type: BS Lab ID: QC515031

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	28.61	114	75-131
Trichloroethene	25.00	29.05	116	80-121
Chlorobenzene	25.00	27.30	109	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	119	75-137
Toluene-d8	105	80-120
Bromofluorobenzene	104	80-123

Type: BSD Lab ID: QC515032

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	25.34	101	75-131	12	20
Trichloroethene	25.00	25.92	104	80-121	11	20
Chlorobenzene	25.00	25.00	100	80-120	9	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	116	75-137
Toluene-d8	102	80-120
Bromofluorobenzene	106	80-123

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	155638
Units:	ug/L	Analyzed:	10/04/09
Diln Fac:	1.000		

Type: BS   Lab ID: QC515031

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	25.06	100	70-120
Benzene	25.00	27.00	108	80-120
Toluene	25.00	27.70	111	80-120
Ethylbenzene	25.00	28.60	114	80-122
m,p-Xylenes	50.00	57.97	116	80-123
o-Xylene	25.00	27.79	111	80-120

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	119	75-137
Toluene-d8	105	80-120
Bromofluorobenzene	104	80-123

Type: BSD   Lab ID: QC515032

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	23.86	95	70-120	5	20
Benzene	25.00	24.67	99	80-120	9	20
Toluene	25.00	25.76	103	80-120	7	20
Ethylbenzene	25.00	26.21	105	80-122	9	20
m,p-Xylenes	50.00	53.71	107	80-123	8	20
o-Xylene	25.00	26.10	104	80-120	6	20

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	116	75-137
Toluene-d8	102	80-120
Bromofluorobenzene	106	80-123

RPD= Relative Percent Difference

Boron

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Prepared:	10/01/09
Diln Fac:	1.000	Analyzed:	10/01/09
Batch#:	155519		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	215257-001	200	100
MW-2	SAMPLE	215257-002	150	100
MW-3	SAMPLE	215257-003	210	100
MW-4	SAMPLE	215257-004	230	100
SOURCE	SAMPLE	215257-005	480	100
L5-COMP	SAMPLE	215257-006	270	100
L10-COMP	SAMPLE	215257-007	300	100
	BLANK	QC514523	ND	100

ND= Not Detected
RL= Reporting Limit

Calcium

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Prepared:	10/01/09
Batch#:	155519	Analyzed:	10/01/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	215257-001	85,000	500	1.000
MW-2	SAMPLE	215257-002	61,000	500	1.000
MW-3	SAMPLE	215257-003	97,000	500	1.000
MW-4	SAMPLE	215257-004	110,000	3,000	10.00
SOURCE	SAMPLE	215257-005	54,000	500	1.000
L5-COMP	SAMPLE	215257-006	160,000	3,000	10.00
L10-COMP	SAMPLE	215257-007	160,000	3,000	10.00
	BLANK	QC514523	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Potassium

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Prepared:	10/01/09
Diln Fac:	1.000	Analyzed:	10/01/09
Batch#:	155519		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	215257-001	610	500
MW-2	SAMPLE	215257-002	900	500
MW-3	SAMPLE	215257-003	ND	500
MW-4	SAMPLE	215257-004	ND	500
SOURCE	SAMPLE	215257-005	17,000	500
L5-COMP	SAMPLE	215257-006	2,500	500
L10-COMP	SAMPLE	215257-007	1,200	500
	BLANK	QC514523	ND	500

ND= Not Detected
RL= Reporting Limit

Magnesium

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Prepared:	10/01/09
Batch#:	155519	Analyzed:	10/01/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	215257-001	54,000	500	1.000
MW-2	SAMPLE	215257-002	36,000	500	1.000
MW-3	SAMPLE	215257-003	58,000	500	1.000
MW-4	SAMPLE	215257-004	57,000	500	1.000
SOURCE	SAMPLE	215257-005	31,000	500	1.000
L5-COMP	SAMPLE	215257-006	82,000	500	1.000
L10-COMP	SAMPLE	215257-007	130,000	3,600	10.00
	BLANK	QC514523	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Sodium

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	ug/L	Prepared:	10/01/09
Batch#:	155519	Analyzed:	10/01/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	215257-001	43,000	500	1.000
MW-2	SAMPLE	215257-002	30,000	500	1.000
MW-3	SAMPLE	215257-003	41,000	500	1.000
MW-4	SAMPLE	215257-004	41,000	500	1.000
SOURCE	SAMPLE	215257-005	170,000	5,000	10.00
L5-COMP	SAMPLE	215257-006	260,000	5,000	10.00
L10-COMP	SAMPLE	215257-007	82,000	500	1.000
	BLANK	QC514523	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Boron

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Batch#:	155519
Field ID:	ZZZZZZZZZZ	Sampled:	09/29/09
MSS Lab ID:	215316-001	Received:	09/30/09
Matrix:	Water	Prepared:	10/01/09
Units:	ug/L	Analyzed:	10/01/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC514524		2,000	2,262	113	80-120		
BSD	QC514525		2,000	2,210	110	80-120	2	20
MS	QC514526	<29.49	2,000	2,039	102	77-122		
MSD	QC514527		2,000	2,140	107	77-122	5	20

RPD= Relative Percent Difference

Batch QC Report

Calcium

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Batch#:	155519
Field ID:	ZZZZZZZZZZ	Sampled:	09/29/09
MSS Lab ID:	215316-001	Received:	09/30/09
Matrix:	Water	Prepared:	10/01/09
Units:	ug/L	Analyzed:	10/01/09
Diln Fac:	1.000		

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**		**Limits**	**RPD**	**Lim**
BS	QC514524		20,000	21,290	106		80-120		
BSD	QC514525		20,000	20,850	104		80-120	2	20
MS	QC514526	34,590	20,000	62,860	141	*	54-135		
MSD	QC514527		20,000	57,330	114		54-135	9	20

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Batch QC Report

Potassium

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Batch#:	155519
Field ID:	ZZZZZZZZZZ	Sampled:	09/29/09
MSS Lab ID:	215316-001	Received:	09/30/09
Matrix:	Water	Prepared:	10/01/09
Units:	ug/L	Analyzed:	10/01/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC514524		20,000	19,880	99	76-120		
BSD	QC514525		20,000	19,430	97	76-120	2	20
MS	QC514526	17,080	20,000	42,320	126	63-129		
MSD	QC514527		20,000	38,780	108	63-129	9	20

RPD= Relative Percent Difference

Batch QC Report

Magnesium

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Batch#:	155519
Field ID:	ZZZZZZZZZZ	Sampled:	09/29/09
MSS Lab ID:	215316-001	Received:	09/30/09
Matrix:	Water	Prepared:	10/01/09
Units:	ug/L	Analyzed:	10/01/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC514524		20,000	21,320	107	80-120		
BSD	QC514525		20,000	21,040	105	80-120	1	20
MS	QC514526	4,820	20,000	29,170	122	61-129		
MSD	QC514527		20,000	26,420	108	61-129	10	20

RPD= Relative Percent Difference

Batch QC Report

Sodium

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Batch#:	155519
Field ID:	ZZZZZZZZZZ	Sampled:	09/29/09
MSS Lab ID:	215316-001	Received:	09/30/09
Matrix:	Water	Prepared:	10/01/09
Units:	ug/L	Analyzed:	10/01/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC514524		20,000	21,110	106	79-120		
BSD	QC514525		20,000	20,390	102	79-120	3	20
MS	QC514526	92,340	20,000	127,300 >LR	175 NM	57-134		
MSD	QC514527		20,000	118,600 >LR	131 NM	57-134	NC	20

NC= Not Calculated
NM= Not Meaningful: Sample concentration > 4X spike concentration
>LR= Response exceeds instrument's linear range
RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	155389
Units:	mg/L	Received:	09/28/09

Field ID:	MW-1	Lab ID:	215257-001
Type:	SAMPLE	Sampled:	09/28/09 09:00

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	59	1.0	5.000	09/29/09 03:07
Nitrogen, Nitrite	ND	0.05	1.000	09/29/09 02:50
Nitrogen, Nitrate	3.4	0.05	1.000	09/29/09 02:50
Sulfate	72	2.5	5.000	09/29/09 03:07

Field ID:	MW-2	Lab ID:	215257-002
Type:	SAMPLE	Sampled:	09/28/09 10:50

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	26	1.0	5.000	09/29/09 03:42
Nitrogen, Nitrite	ND	0.05	1.000	09/29/09 03:24
Nitrogen, Nitrate	3.1	0.05	1.000	09/29/09 03:24
Sulfate	34	0.50	1.000	09/29/09 03:24

Field ID:	MW-3	Lab ID:	215257-003
Type:	SAMPLE	Sampled:	09/28/09 11:55

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	59	1.0	5.000	09/29/09 05:26
Nitrogen, Nitrite	ND	0.05	1.000	09/29/09 05:09
Nitrogen, Nitrate	2.5	0.05	1.000	09/29/09 05:09
Sulfate	62	2.5	5.000	09/29/09 05:26

Field ID:	MW-4	Lab ID:	215257-004
Type:	SAMPLE	Sampled:	09/28/09 09:45

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	56	1.0	5.000	09/29/09 06:01
Nitrogen, Nitrite	ND	0.05	1.000	09/29/09 05:44
Nitrogen, Nitrate	2.6	0.05	1.000	09/29/09 05:44
Sulfate	68	2.5	5.000	09/29/09 06:01

Field ID:	SOURCE	Lab ID:	215257-005
Type:	SAMPLE	Sampled:	09/28/09 10:00

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	220	4.0	20.00	09/29/09 09:58
Nitrogen, Nitrite	ND	0.05	1.000	09/29/09 01:57
Nitrogen, Nitrate	10	0.25	5.000	09/29/09 02:15
Sulfate	99	2.5	5.000	09/29/09 02:15

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	155389
Units:	mg/L	Received:	09/28/09

Field ID:	L5-COMP	Lab ID:	215257-006
Type:	SAMPLE	Sampled:	09/28/09

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	160	5.0	25.00	09/29/09 06:19
Nitrogen, Nitrite	ND	0.05	1.000	09/29/09 07:28
Nitrogen, Nitrate	1.7	0.05	1.000	09/29/09 07:28
Sulfate	370	13	25.00	09/29/09 06:19

Field ID:	L10-COMP	Lab ID:	215257-007
Type:	SAMPLE	Sampled:	09/28/09

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	96	1.0	5.000	09/29/09 07:11
Nitrogen, Nitrite	ND	0.05	1.000	09/29/09 06:53
Nitrogen, Nitrate	3.4	0.05	1.000	09/29/09 06:53
Sulfate	150	2.5	5.000	09/29/09 07:11

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC513998	Analyzed:	09/28/09 10:47

Analyte	Result	RL
Chloride	ND	0.20
Nitrogen, Nitrite	ND	0.05
Nitrogen, Nitrate	ND	0.05
Sulfate	ND	0.50

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC513999	Batch#:	155389
Matrix:	Water	Analyzed:	09/28/09 11:04
Units:	mg/L		

Analyte	Spiked	Result	%REC	Limits
Chloride	4.000	4.059	101	80-120
Nitrogen, Nitrite	1.000	0.9469	95	80-120
Nitrogen, Nitrate	1.000	1.049	105	80-120
Sulfate	10.00	10.32	103	80-120

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Field ID:	ZZZZZZZZZZ	Diln Fac:	250.0
MSS Lab ID:	215081-001	Batch#:	155389
Matrix:	Water	Sampled:	09/21/09 09:22
Units:	mg/L	Received:	09/21/09

Type: MS
Analyzed: 09/29/09 09:23
Lab ID: QC514015

Analyte	MSS Result	Spiked	Result	%REC	Limits
Chloride	3,381	500.0	3,816	87 NM	80-120
Nitrogen, Nitrite	<1.153	125.0	119.7	96	80-120
Nitrogen, Nitrate	<1.445	125.0	131.8	105	80-120
Sulfate	<5.885	1,250	1,283	103	80-120

Type: MSD
Analyzed: 09/29/09 09:40
Lab ID: QC514016

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	500.0	3,811	86 NM	80-120	0	20
Nitrogen, Nitrite	125.0	121.4	97	80-120	1	20
Nitrogen, Nitrate	125.0	130.7	105	80-120	1	20
Sulfate	1,250	1,260	101	80-120	2	20

NM= Not Meaningful: Sample concentration > 4X spike concentration
RPD= Relative Percent Difference

Alkalinity

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	09/28/09
Units:	mg/L	Received:	09/28/09
Batch#:	155721	Analyzed:	10/06/09

Field ID: MW-1 Lab ID: 215257-001
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	310	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	310	6.7

Field ID: MW-2 Lab ID: 215257-002
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	240	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	240	6.7

Field ID: MW-3 Lab ID: 215257-003
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	390	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	390	6.7

Field ID: MW-4 Lab ID: 215257-004
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	390	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	390	6.7

Field ID: SOURCE Lab ID: 215257-005
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	170	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	170	6.7

ND= Not Detected
RL= Reporting Limit

Alkalinity

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	09/28/09
Units:	mg/L	Received:	09/28/09
Batch#:	155721	Analyzed:	10/06/09

Field ID: L5-COMP Lab ID: 215257-006
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	670	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	670	6.7

Field ID: L10-COMP Lab ID: 215257-007
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	670	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	670	6.7

Type: BLANK Diln Fac: 1.000
Lab ID: QC515347

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Alkalinity

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Units:	mg/L
Type:	LCS	Diln Fac:	4.000
Lab ID:	QC515348	Batch#:	155721
Matrix:	Water	Analyzed:	10/06/09

Spiked	Result	%REC	Limits
200.0	187.6	94	90-100

Batch QC Report

Alkalinity

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Diln Fac:	4.000
Field ID:	ZZZZZZZZZZ	Batch#:	155721
MSS Lab ID:	215255-001	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	mg/L	Analyzed:	10/06/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC515349	1,863	200.0	2,052	94	80-120		
MSD	QC515350		200.0	2,060	98	80-120	0	25

RPD= Relative Percent Difference

Total Cyanide

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	155760
Field ID:	SOURCE	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	mg/L	Analyzed:	10/07/09
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	215257-005	ND	0.01
BLANK	QC515520	ND	0.01

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Cyanide

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	155760
MSS Lab ID:	215420-006	Sampled:	10/02/09
Matrix:	Water	Received:	10/02/09
Units:	mg/L	Analyzed:	10/07/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC515521	<0.01000	0.2000	0.2052	103	69-121		
MSD	QC515522		0.2000	0.2167	108	69-121	5	13
LCS	QC515523		0.2000	0.1979	99	83-116		

RPD= Relative Percent Difference

Dissolved Organic Carbon (DOC)

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Batch#:	155716
Matrix:	Water	Sampled:	09/28/09
Units:	mg/L	Received:	09/28/09
Diln Fac:	1.000	Analyzed:	10/06/09

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	215257-001	ND	1.0
MW-2	SAMPLE	215257-002	ND	1.0
MW-3	SAMPLE	215257-003	ND	1.0
MW-4	SAMPLE	215257-004	ND	1.0
SOURCE	SAMPLE	215257-005	5.8	1.0
L5-COMP	SAMPLE	215257-006	5.9 b	1.0
L10-COMP	SAMPLE	215257-007	2.9	1.0
	BLANK	QC515327	ND	1.0

b= See narrative
ND= Not Detected
RL= Reporting Limit

Batch QC Report

Dissolved Organic Carbon (DOC)

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	155716
MSS Lab ID:	215255-001	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	mg/L	Analyzed:	10/06/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC515328		10.00	9.925	99	90-110		
MS	QC515329	4.901	2.000	5.601	35 *	83-119		
MSD	QC515330		2.000	5.535	32 *	83-119	1	6

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Surfactants (MBAS)

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	155458
Field ID:	SOURCE	Sampled:	09/28/09 10:00
Matrix:	Water	Received:	09/28/09
Units:	mg/L	Prepared:	09/29/09 18:00
Diln Fac:	1.000	Analyzed:	09/30/09 15:53

Type	Lab ID	Result	RL
SAMPLE	215257-005	ND	0.20
BLANK	QC514267	ND	0.20

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Surfactants (MBAS)

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	155458
Field ID:	SOURCE	Sampled:	09/28/09 10:00
MSS Lab ID:	215257-005	Received:	09/28/09
Matrix:	Water	Prepared:	09/29/09 18:00
Units:	mg/L	Analyzed:	09/30/09 15:53
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC514268		0.6000	0.5535	92	80-120		
MS	QC514269	<0.2000	0.6000	0.6368	106	70-130		
MSD	QC514270		0.6000	0.6927	115	70-130	8	30

RPD= Relative Percent Difference

Total Phosphorous

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	mg/L	Analyzed:	10/07/09
Batch#:	155735		

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	215257-001	0.040	0.030	1.000
MW-2	SAMPLE	215257-002	0.17	0.030	1.000
MW-3	SAMPLE	215257-003	0.051	0.030	1.000
MW-4	SAMPLE	215257-004	0.050	0.030	1.000
SOURCE	SAMPLE	215257-005	0.60	0.075	2.500
L5-COMP	SAMPLE	215257-006	0.21	0.044	1.470
L10-COMP	SAMPLE	215257-007	0.062	0.030	1.000
	BLANK	QC515412	ND	0.030	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Phosphorous

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Batch#:	155735
Field ID:	ZZZZZZZZZZ	Sampled:	09/28/09
MSS Lab ID:	215255-001	Received:	09/28/09
Matrix:	Water	Analyzed:	10/07/09
Units:	mg/L		

Type	Lab ID	MSS Result	Spiked	Result	%REC		Limits	RPD	Lim	Diln Fac
LCS	QC515413		0.3960	0.4102	104		92-113			1.000
MS	QC515414	2.641	0.3960	3.356	226	*	41-144			10.00
MSD	QC515415		0.3960	3.326	219	*	41-144	1	24	10.00

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Total Dissolved Solids (TDS)

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	mg/L	Prepared:	10/05/09
Batch#:	155671	Analyzed:	10/06/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	215257-001	530	10	1.000
MW-2	SAMPLE	215257-002	400	10	1.000
MW-3	SAMPLE	215257-003	580	10	1.000
MW-4	SAMPLE	215257-004	590	10	1.000
SOURCE	SAMPLE	215257-005	760	10	1.000
L5-COMP	SAMPLE	215257-006	1,380	14	1.429
L10-COMP	SAMPLE	215257-007	1,010	10	1.000
	BLANK	QC515162	ND	10	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Dissolved Solids (TDS)

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Batch#:	155671
Field ID:	MW-1	Sampled:	09/28/09
MSS Lab ID:	215257-001	Received:	09/28/09
Matrix:	Water	Prepared:	10/05/09
Units:	mg/L	Analyzed:	10/06/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
BS	QC515163		104.0	92.00		88	80-103		
BSD	QC515164		104.0	92.00		88	80-103	0	13
SDUP	QC515165	530.0		542.0	10.00			2	7

RL= Reporting Limit
RPD= Relative Percent Difference

Total Organic Carbon (TOC)

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Batch#:	155599
Matrix:	Water	Sampled:	09/28/09
Units:	mg/L	Received:	09/28/09
Diln Fac:	1.000	Analyzed:	10/02/09

Field ID	**Type**	**Lab ID**	**Result**	**RL**
MW-1	SAMPLE	215257-001	0.54	0.50
MW-2	SAMPLE	215257-002	ND	0.50
MW-3	SAMPLE	215257-003	ND	0.50
MW-4	SAMPLE	215257-004	0.60	0.50
SOURCE	SAMPLE	215257-005	6.4	0.50
L5-COMP	SAMPLE	215257-006	7.0	0.50
L10-COMP	SAMPLE	215257-007	2.9	0.50
	BLANK	QC514873	ND	0.50

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Organic Carbon (TOC)

Lab #:	215257	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Diln Fac:	1.000
Field ID:	MW-1	Batch#:	155599
MSS Lab ID:	215257-001	Sampled:	09/28/09
Matrix:	Water	Received:	09/28/09
Units:	mg/L	Analyzed:	10/02/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC514874		10.00	9.970	100	90-110		
MS	QC514875	0.5387	2.000	2.584	102	61-119		
MSD	QC514876		2.000	2.471	97	61-119	4	6

RPD= Relative Percent Difference

Laboratory Job Number 215257

Subcontracted Products

Columbia Analytical Services

1317 South 13th Avenue Kelso, Washington 98626 (360) 577-7222 (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

October 19, 2009 Analytical Report for Service Request No: K0909404

Micah Smith
Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

RE: Recycled Water Study/215257

Dear Micah:

Enclosed are the results of the samples submitted to our laboratory on October 02, 2009. For your reference, these analyses have been assigned our service request number K0909404.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3281. You may also contact me via Email at PDivvela@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Pradeep Divvela
Project Chemist

PD/cw

Page 1 of 19

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL or LOQ but greater than or equal to the MDL or LOD.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The LOD has been adjusted for dilution.
i	The MRL/MDL or LOQ/LOD has been elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated concentration that is less than the MRL or LOQ but greater than or equal to the MDL or LOD.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The LOD has been adjusted for any dilution or
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD has been elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The LOD has been adjusted for any dilution or
i	The MRL/MDL or LOQ/LOD has been elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Curtis & Tompkins, Ltd.	**Service Request No.:**	K0909404
Project:	Recycled Water Study	**Date Received:**	10/02/09
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix Spike (MS), and Laboratory Control Sample (LCS).

Sample Receipt

Seven water samples were received for analysis at Columbia Analytical Services on 10/02/09. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Haloacetic Acids by EPA Method 552.2

No anomalies associated with the analysis of these samples were observed.

10/19/09

Approved by____________________________ **Date**____________

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Collected:**	09/28/2009
Sample Matrix:	Drinking water	**Date Received:**	10/02/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-1	**Units:**	ug/L
Lab Code:	K0909404-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	10/08/09	10/09/09	KWG0909298	
Bromoacetic Acid	ND	U	0.99	0.13	1	10/08/09	10/09/09	KWG0909298	
Dichloroacetic Acid	ND	U	0.99	0.18	1	10/08/09	10/09/09	KWG0909298	
Trichloroacetic Acid	ND	U	0.99	0.33	1	10/08/09	10/09/09	KWG0909298	
Bromochloroacetic Acid	ND	U	0.99	0.15	1	10/08/09	10/09/09	KWG0909298	
Dibromoacetic Acid	ND	U	0.99	0.14	1	10/08/09	10/09/09	KWG0909298	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	99	70-130	10/09/09	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Collected:**	09/28/2009
Sample Matrix:	Drinking water	**Date Received:**	10/02/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-2	**Units:**	ug/L
Lab Code:	K0909404-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	10/08/09	10/09/09	KWG0909298	
Bromoacetic Acid	ND	U	1.0	0.13	1	10/08/09	10/09/09	KWG0909298	
Dichloroacetic Acid	ND	U	1.0	0.18	1	10/08/09	10/09/09	KWG0909298	
Trichloroacetic Acid	ND	U	1.0	0.33	1	10/08/09	10/09/09	KWG0909298	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	10/08/09	10/09/09	KWG0909298	
Dibromoacetic Acid	ND	U	1.0	0.14	1	10/08/09	10/09/09	KWG0909298	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	94	70-130	10/09/09	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Collected:**	09/28/2009
Sample Matrix:	Drinking water	**Date Received:**	10/02/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-3	**Units:**	ug/L
Lab Code:	K0909404-003	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	10/08/09	10/09/09	KWG0909298	
Bromoacetic Acid	ND	U	0.99	0.13	1	10/08/09	10/09/09	KWG0909298	
Dichloroacetic Acid	ND	U	0.99	0.18	1	10/08/09	10/09/09	KWG0909298	
Trichloroacetic Acid	ND	U	0.99	0.33	1	10/08/09	10/09/09	KWG0909298	
Bromochloroacetic Acid	ND	U	0.99	0.15	1	10/08/09	10/09/09	KWG0909298	
Dibromoacetic Acid	ND	U	0.99	0.14	1	10/08/09	10/09/09	KWG0909298	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	97	70-130	10/09/09	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Collected:**	09/28/2009
Sample Matrix:	Drinking water	**Date Received:**	10/02/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-4	**Units:**	ug/L
Lab Code:	K0909404-004	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	10/08/09	10/09/09	KWG0909298	
Bromoacetic Acid	ND	U	1.0	0.13	1	10/08/09	10/09/09	KWG0909298	
Dichloroacetic Acid	ND	U	1.0	0.18	1	10/08/09	10/09/09	KWG0909298	
Trichloroacetic Acid	ND	U	1.0	0.33	1	10/08/09	10/09/09	KWG0909298	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	10/08/09	10/09/09	KWG0909298	
Dibromoacetic Acid	ND	U	1.0	0.14	1	10/08/09	10/09/09	KWG0909298	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	99	70-130	10/09/09	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Collected:**	09/28/2009
Sample Matrix:	Drinking water	**Date Received:**	10/02/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	Source	**Units:**	ug/L
Lab Code:	K0909404-005	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	**4.2**		2.0	0.16	1	10/08/09	10/09/09	KWG0909298	
Bromoacetic Acid	ND	U	1.0	0.13	1	10/08/09	10/09/09	KWG0909298	
Dichloroacetic Acid	**1.8**		1.0	0.18	1	10/08/09	10/09/09	KWG0909298	
Trichloroacetic Acid	**3.8**		1.0	0.33	1	10/08/09	10/09/09	KWG0909298	
Bromochloroacetic Acid	**0.92**	J	1.0	0.15	1	10/08/09	10/09/09	KWG0909298	
Dibromoacetic Acid	**0.33**	J	1.0	0.14	1	10/08/09	10/09/09	KWG0909298	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	94	70-130	10/09/09	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Collected:**	09/28/2009
Sample Matrix:	Drinking water	**Date Received:**	10/02/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	L5-Comp	**Units:**	ug/L
Lab Code:	K0909404-006	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	10/08/09	10/09/09	KWG0909298	
Bromoacetic Acid	ND	U	1.0	0.13	1	10/08/09	10/09/09	KWG0909298	
Dichloroacetic Acid	**0.19**	J	1.0	0.18	1	10/08/09	10/09/09	KWG0909298	
Trichloroacetic Acid	ND	U	1.0	0.33	1	10/08/09	10/09/09	KWG0909298	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	10/08/09	10/09/09	KWG0909298	
Dibromoacetic Acid	**0.17**	J	1.0	0.14	1	10/08/09	10/09/09	KWG0909298	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	101	70-130	10/09/09	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Collected:**	09/28/2009
Sample Matrix:	Drinking water	**Date Received:**	10/02/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	L10-Comp	**Units:**	ug/L
Lab Code:	K0909404-007	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	10/08/09	10/09/09	KWG0909298	
Bromoacetic Acid	ND	U	1.0	0.13	1	10/08/09	10/09/09	KWG0909298	
Dichloroacetic Acid	**0.40**	J	1.0	0.18	1	10/08/09	10/09/09	KWG0909298	
Trichloroacetic Acid	ND	U	1.0	0.33	1	10/08/09	10/09/09	KWG0909298	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	10/08/09	10/09/09	KWG0909298	
Dibromoacetic Acid	**0.51**	J	1.0	0.14	1	10/08/09	10/09/09	KWG0909298	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	107	70-130	10/09/09	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Collected:**	NA
Sample Matrix:	Drinking water	**Date Received:**	NA

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0909298-1	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	10/08/09	10/08/09	KWG0909298	
Bromoacetic Acid	ND	U	1.0	0.13	1	10/08/09	10/08/09	KWG0909298	
Dichloroacetic Acid	ND	U	1.0	0.18	1	10/08/09	10/08/09	KWG0909298	
Trichloroacetic Acid	ND	U	1.0	0.33	1	10/08/09	10/08/09	KWG0909298	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	10/08/09	10/08/09	KWG0909298	
Dibromoacetic Acid	ND	U	1.0	0.14	1	10/08/09	10/08/09	KWG0909298	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	94	70-130	10/08/09	Acceptable

Comments:

Client: Curtis & Tompkins, Ltd.
Project: Recycled Water Study/215257
Sample Matrix: Drinking water
Service Request: K0909404

Surrogate Recovery Summary
Haloacetic Acids by EPA MEthod 552.2

Extraction Method: METHOD
Analysis Method: 552.2
Units: ug/L
Level: Low

Sample Name	Lab Code	Sur1
MW-1	K0909404-001	99
MW-2	K0909404-002	94
MW-3	K0909404-003	97
MW-4	K0909404-004	99
Source	K0909404-005	94
L5-Comp	K0909404-006	101
L10-Comp	K0909404-007	107
Method Blank	KWG0909298-1	94
Batch QC	K0909374-001	98
Batch QCMS	KWG0909298-4	99
Lab Control Sample	KWG0909298-2	122
Lab Control Sample	KWG0909298-3	98

Surrogate Recovery Control Limits (%)

Sur1 = 2,3-Dibromopropionic Acid	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Extracted:**	10/08/2009
Sample Matrix:	Drinking water	**Date Analyzed:**	10/09/2009

Matrix Spike Summary
Haloacetic Acids by EPA MEthod 552.2

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K0909374-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2	**Extraction Lot:**	KWG0909298

		Batch QCMS KWG0909298-4 Matrix Spike			
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Chloroacetic Acid	ND	4.69	4.96	95	70-130
Bromoacetic Acid	ND	5.36	4.96	108	70-130
Dichloroacetic Acid	ND	5.01	4.96	101	70-130
Trichloroacetic Acid	ND	5.03	4.96	101	70-130
Bromochloroacetic Acid	ND	4.90	4.96	99	70-130
Dibromoacetic Acid	ND	5.20	4.96	105	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Extracted:**	10/08/2009
Sample Matrix:	Drinking water	**Date Analyzed:**	10/09/2009

Lab Control Spike Summary
Haloacetic Acids by EPA MEthod 552.2

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	552.2	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0909298

	Lab Control Sample KWG0909298-2 **Lab Control Spike**			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Chloroacetic Acid	5.45	5.00	109	70-130
Bromoacetic Acid	5.17	5.00	103	70-130
Dichloroacetic Acid	5.49	5.00	110	70-130
Trichloroacetic Acid	6.38	5.00	128	70-130
Bromochloroacetic Acid	6.26	5.00	125	70-130
Dibromoacetic Acid	6.09	5.00	122	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0909404
Project:	Recycled Water Study/215257	**Date Extracted:**	10/08/2009
Sample Matrix:	Drinking water	**Date Analyzed:**	10/08/2009

Lab Control Spike Summary
Haloacetic Acids by EPA MEthod 552.2

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	552.2	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0909298

	Lab Control Sample KWG0909298-3 **Lab Control Spike**			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Bromoacetic Acid	5.67	5.00	113	70-130
Chloroacetic Acid	5.35	5.00	107	70-130
Dichloroacetic Acid	5.36	5.00	107	70-130
Trichloroacetic Acid	4.98	5.00	100	70-130
Bromochloroacetic Acid	4.98	5.00	100	70-130
Dibromoacetic Acid	5.13	5.00	103	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900
(510) 486-0532

K0909404

Project Number: 215257
Site: Recycled Water Study

Subcontract Laboratory:
Columbia Analytical Services
1317 South 13th Ave
Kelso, WA 98626
(360) 577-7222
ATTN: Pradeep Divvela

Results due: Report Level: II

Please send report to: Micah Smith (micah.smith@ctberk.com)
*** Please report using Sample ID rather than C&T Lab #.

Sample ID	Sampled	Matrix	Analysis	C&T Lab #	Comments
MW-1	09/28 09:00	Water	552	215257-001	
MW-2	09/28 10:50	Water	552	215257-002	
MW-3	09/28 11:55	Water	552	215257-003	
MW-4	09/28 09:45	Water	552	215257-004	
SOURCE	09/28 10:00	Water	552	215257-005	
L5-COMP	09/28 00:00 SAMPLES!!!!!	Water	552	215257-006	LIMITED
L10-COMP	09/28 00:00 SAMPLES!!!!!	Water	552	215257-007	LIMITED

Notes:	Relinquished By:	Received By:
	Date/Time: 9/30/9 1500	Date/Time: 10/2/09 1200

Signature on this form constitutes a firm Purchase Order for the services requested above.

Page 1 of 1

PC PD

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

Client / Project: Curtis & Tompkins Service Request *K09* 09404

Received: 10/2/09 Opened: 10/2/09 By: 77

1. Samples were received via? *US Mail* *Fed Ex* *UPS* *DHL* *GH* *GS* *PDX* [✓ *Courier* California Overnight] *Hand Delivered*
2. Samples were received in: (circle) [✓ *Cooler*] *Box* *Envelope* *Other*______ *NA*
3. Were custody seals on coolers? NA Y [✓ N] If yes, how many and where? NA

   If present, were custody seals intact? ~~Y N~~ NA If present, were they signed and dated? ~~Y N~~ NA
4. Is shipper's air-bill filed? If not, record air-bill number:______ [✓ NA] Y N
5. **Temperature of cooler(s) upon receipt (°C):** -0.8

   Temperature Blank (°C):

   Thermometer ID: 259
6. If applicable, list Chain of Custody Numbers:
7. Packing material used. *Inserts* [✓ *Baggies*] [✓ *Bubble Wrap*] *Gel Packs* [✓ *Wet Ice*] *Sleeves* *Other*______
8. Were custody papers properly filled out (ink, signed, etc.)? NA [✓ Y] N
9. **Did all bottles arrive in good condition (unbroken)?** *Indicate in the table below.* NA [✓ Y] N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA [✓ Y] N
11. Did all sample labels and tags agree with custody papers? *Indicate in the table below* NA [✓ Y] N
12. **Were appropriate bottles/containers and volumes received for the tests indicated?** NA [✓ Y] N
13. Were the pH-preserved bottles tested* received at the appropriate pH? *Indicate in the table below* [✓ NA] Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* [✓ NA] Y N
15. **Are CWA Microbiology samples received with >1/2 the 24hr. hold time remaining from collection?** [✓ NA] Y N
16. Was C12/Res negative? [✓ NA] Y N

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

**Does not include all pH preserved sample aliquots received. See sample receiving SOP (SMO-GEN).*

Additional Notes, Discrepancies, & Resolutions:

Page 1 of: 1 2

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 585425

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 10-01-2009
MPN-Standard Bacteria: 10-02-2009

Project SOPs: MPN-Standard Bacteria (100130)

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 09-28-2009
Date of Receipt: 09-28-2009
Date of Report: 10-02-2009

MPN REPORT

Location: MW-1 Lab ID-Version‡: 2595378-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	09/28/09 15:00	< 2	-	14
Total Coliform	SM 9221 B	09/28/09 15:00	< 2	-	14
E. coli	SM 9221 F	09/28/09 15:00	< 2	-	14

Comments:

Location: MW-2 Lab ID-Version‡: 2595380-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	09/28/09 15:00	< 2	-	14
Total Coliform	SM 9221 B	09/28/09 15:00	< 2	-	14
E. coli	SM 9221 F	09/28/09 15:00	< 2	-	14

Comments:

Location: MW-3 Lab ID-Version‡: 2595382-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	09/28/09 15:00	< 2	-	14
Total Coliform	SM 9221 B	09/28/09 15:00	< 2	-	14
E. coli	SM 9221 F	09/28/09 15:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 09-28-2009
Date of Receipt: 09-28-2009
Date of Report: 10-02-2009

MPN REPORT

Location: MW-4 Lab ID-Version‡: 2595384-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	09/28/09 15:00	< 2	-	14
Total Coliform	SM 9221 B	09/28/09 15:00	< 2	-	14
E. coli	SM 9221 F	09/28/09 15:00	< 2	-	14

Comments:

Location: L10-Comp Lab ID-Version‡: 2595386-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	09/28/09 15:00	< 2	-	14
Total Coliform	SM 9221 B	09/28/09 15:00	24	8	72
E. coli	SM 9221 F	09/28/09 15:00	< 2	-	14

Comments:

Location: Source Lab ID-Version‡: 2595388-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	09/28/09 15:00	2	0.01	14
Total Coliform	SM 9221 B	09/28/09 15:00	24	8	72
E. coli	SM 9221 F	09/28/09 15:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 585425

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 10-01-2009

This coversheet is included with your report in order to comply with AIHA and ISO accreditation requirements.

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

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1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 09-28-2009
Date of Receipt: 09-28-2009
Date of Report: 10-01-2009

HETEROTROPHIC PLATE COUNT REPORT

Location:	MW-1	MW-2	MW-3
Comments (see below)	None	None	None
Lab ID-Version‡:	2595377-1	2595379-1	2595381-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	09/28/2009 at 02:00 PM	09/28/2009 at 02:00 PM	09/28/2009 at 03:00 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	47 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	430	1,500	220
Read Time	09/30/2009 at 02:00 PM	09/30/2009 at 02:00 PM	09/30/2009 at 02:00 PM

Comments:

Location:	MW-4	L10-Comp	Source
Comments (see below)	None	None	None
Lab ID-Version‡:	2595383-1	2595385-1	2595387-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	09/28/2009 at 02:00 PM	09/28/2009 at 02:00 PM	09/28/2009 at 02:00 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	370	890	> 57,000 (est.*)
Read Time	09/30/2009 at 02:00 PM	09/30/2009 at 02:00 PM	09/30/2009 at 02:00 PM

Comments:

* Estimated result

‡ A "Version" greater than 1 indicates amended data.

MWH LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Report revised, replaces original report.

Date of Issue
10/26/2009
Yolanda Martin
MWH LABORATORIES

01114CA

Report#: 315720
Project:
RECYCLED-WATER-STUDY
Group: Chemistry
PO#: B30-12470

YOM: Yolanda.O.Martin

Project Manager

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH Laboratories

750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 315720
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Yolanda.O.Martin
Phone: 626-386-1104
PO #: B30-12470

The following samples were received from you on **September 30, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Sample Date
200909300030	L-10 Composite	28-Sep-2009 0000
	@NDMA_SPE @PFC	
200909300031	MW-1	28-Sep-2009 0900
	@NDMA_SPE @PFC	
200909300032	MW-2	28-Sep-2009 1050
	@NDMA_SPE @PFC	
200909300033	MW-3	28-Sep-2009 1155
	@NDMA_SPE @PFC	
200909300034	MW-4	28-Sep-2009 0945
	@NDMA_SPE @PFC	
200909300035	Source	28-Sep-2009 1000
	@525PLUS @NDMA_SPE @PFC EDTA	

Test Description

@525PLUS -- Semivolatiles by GCMS

@NDMA_SPE -- Nitrosamines by GCMS

@PFC -- Perfluorinated compounds

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

SCANNED

315720

MWH LABS USE ONLY:

LOGIN COMMENTS: * LOW VOLUME FOR PFC (25ML) 0

SAMPLE TEMP WHEN REC'D AT LAB: 4c (Compliance: 4 +/- 2*C)

CONDITION OF BLUE ICE: FROZEN ✓ PARTIALLY FROZEN ___ THAWED ___

SAMPLES CHECKED AGAINST COC BY:

SAMPLES LOGGED IN BY:

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: Locus Technologies

PROJECT CODE: 27011-07-7000

COMPLIANCE SAMPLES - Requires state forms ☐ *(check for yes)*

NON-COMPLIANCE SAMPLES REGULATION INVOLVED: ☐ *(check for yes)* (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: Locus

COC ID:

SAMPLE GROUP:

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: H. Castro / T. Murphy /

TAT requested: rush by adv notice only
STD ✓ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	Field Data Grab	Field Data Comp	NDMA	PFC's	EDTA	EPA525plus	SAMPLER COMMENTS
9-28-09	comp	L5 Comp	IDT	RGW		X	0	0	0	0	
	comp	*L10 Comp	↓	↓		X	1	1	0	0	
	900	MW-1			X		2	1	0	0	
	1050	MW-2			X		2	1	0	0	
	1155	MW-3			X		2	1	0	0	
	945	MW-4			X		2	1	0	0	
	1000	Source			X		2	1	1	2	→ 1 OF 2 BROKEN IN TRANSIT

* MATRIX TYPES: RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
SEAW = Sea Water
WW = Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge
O = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		Henry Castro Jr	Locus Tech.	9-29-09	
RECEIVED BY:	Jane Henry	Jane Henry	MWH	9-29-09	12:25
RELINQUISHED BY:	Jane Henry	Jane Henry	MWH	9-29-09	15:55
RECEIVED BY:		M. DELLESA	Mcoll	9-30-9	1739

C-O-C# ______

PAGE ____ OF ____

OnTrac
On Time Delivery For Less
800.334.5000
ontrac.com

D10010231390579

Date Printed 9/29/2009

Tracking#D10010231390579

Shipped From:
MWH Laboratories
910 Riverside Parkway 30
West Sacramento, CA 95605

Sent By: RITA REEVES
Phone#: (916)374-8030
wgt(lbs): 45
Reference:

Ship To Company: **MWH LABS SAMPLE RECEIVING** **750 ROYAL OAKS DRIVE 100** **MONROVIA, CA 91016** **KIRK WAHRMAN (626)386-1092**	*Service:* **G** *Sort Code:* **COM** *Special Services:* **Signature Required**

OnTrac
On Time Delivery For Less

800.334.5000
ontrac.com

D10010231390652

Date Printed 9/29/2009

Tracking#D10010231390652

Shipped From:
MWH Laboratories
910 Riverside Parkway 30
West Sacramento, CA 95605

Sent By: RITA REEVES
Phone#: (916)374-8030
wgt(lbs): 45
Reference:

Ship To Company: **MWH LABS SAMPLE RECEIVING** **750 ROYAL OAKS DRIVE 100** **MONROVIA, CA 91016** **KIRK WAHRMAN (626)386-1092**	*Service:* **G** *Sort Code:* **COM** *Special Services:* **Signature Required**

MWH
LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 315720

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
09/30/2009

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	200909300030	**L-10 Composite**				
10/07/2009 3:07	N-Nitroso dimethylamine (NDMA)		3.3		ng/l	2
10/09/2009 23:02	Perfluoro octanesulfonate-PFOS		6.0		ng/L	5
	200909300031	**MW-1**				
10/09/2009 23:13	Perfluoro octanesulfonate-PFOS		10		ng/L	5
	200909300035	**Source**				
10/08/2009 16:34	N-Nitroso dimethylamine (NDMA)		240		ng/l	10
10/16/2009 10:28	Perfluoro octanesulfonate-PFOS		87		ng/L	10
10/16/2009 10:28	Perfluoro octanoic acid - PFOA		100		ng/L	10

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
09/30/2009

L-10 Composite (200909300030) **Sampled on 09/28/2009 0000**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
10/2/2009	10/07/2009 3:07	526737	(EPA 521)	N-Nitroso dimethylamine (NDMA)	3.3	ng/l	2	1
10/2/2009	10/07/2009 3:07	526737	(EPA 521)	NDMA-D6	79	%		1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	10/09/2009 23:02	527627	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	10/09/2009 23:02	527627	(MWH PFC)	Perfluoro octanesulfonate-PFOS	6.0	ng/L	5	1
	10/09/2009 23:02	527627	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	10/09/2009 23:02	527627	(MWH PFC)	PFBA-C13	100	%		1
	10/09/2009 23:02	527627	(MWH PFC)	PFOA-C13	101	%		1
	10/09/2009 23:02	527627	(MWH PFC)	PFOS-C13	54	%		1

MW-1 (200909300031) **Sampled on 09/28/2009 0900**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
10/2/2009	10/07/2009 3:51	526737	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
10/2/2009	10/07/2009 3:51	526737	(EPA 521)	NDMA-D6	74	%		1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	10/09/2009 23:13	527627	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	10/09/2009 23:13	527627	(MWH PFC)	Perfluoro octanesulfonate-PFOS	10	ng/L	5	1
	10/09/2009 23:13	527627	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	10/09/2009 23:13	527627	(MWH PFC)	PFBA-C13	101	%		1
	10/09/2009 23:13	527627	(MWH PFC)	PFOA-C13	105	%		1
	10/09/2009 23:13	527627	(MWH PFC)	PFOS-C13	58	%		1

MW-2 (200909300032) **Sampled on 09/28/2009 1050**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
10/2/2009	10/07/2009 4:35	526737	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND (R4)	ng/l	2	1
10/2/2009	10/07/2009 4:35	526737	(EPA 521)	NDMA-D6	82	%		1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	10/09/2009 23:25	527627	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	10/09/2009 23:25	527627	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	10/09/2009 23:25	527627	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	10/09/2009 23:25	527627	(MWH PFC)	PFBA-C13	98	%		1
	10/09/2009 23:25	527627	(MWH PFC)	PFOA-C13	104	%		1
	10/09/2009 23:25	527627	(MWH PFC)	PFOS-C13	62	%		1

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
09/30/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
MW-3 (200909300033)						**Sampled on**	**09/28/2009 1155**	
			EPA 521 - Nitrosamines by GCMS					
10/2/2009	10/07/2009 5:19	526737	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
10/2/2009	10/07/2009 5:19	526737	(EPA 521)	NDMA-D6	97	%		1
			MWH PFC - Perfluorinated compounds					
	10/15/2009 15:17	527973	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	10/15/2009 15:17	527973	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	10/15/2009 15:17	527973	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	10/15/2009 15:17	527973	(MWH PFC)	PFBA-C13	101	%		1
	10/15/2009 15:17	527973	(MWH PFC)	PFOA-C13	94	%		1
	10/15/2009 15:17	527973	(MWH PFC)	PFOS-C13	59	%		1
MW-4 (200909300034)						**Sampled on**	**09/28/2009 0945**	
			EPA 521 - Nitrosamines by GCMS					
10/2/2009	10/07/2009 6:03	526737	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/l	2	1
10/2/2009	10/07/2009 6:03	526737	(EPA 521)	NDMA-D6	76	%		1
			MWH PFC - Perfluorinated compounds					
	10/09/2009 23:48	527627	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	10/09/2009 23:48	527627	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	10/09/2009 23:48	527627	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	10/09/2009 23:48	527627	(MWH PFC)	PFBA-C13	96	%		1
	10/09/2009 23:48	527627	(MWH PFC)	PFOA-C13	102	%		1
	10/09/2009 23:48	527627	(MWH PFC)	PFOS-C13	59	%		1
Source (200909300035)						**Sampled on**	**09/28/2009 1000**	
			EPA 525.2 - Semivolatiles by GCMS					
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Aldrin	ND	ug/L	0.05	1

Locus Technologies
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Samples Received on:
09/30/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1

Locus Technologies
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Samples Received on:
09/30/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Heptachlor	ND	ug/L	0.03	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.2	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	95	%		1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Perylene-d12	86	%		1
10/1/2009	10/02/2009 18:27	526425	(EPA 525.2)	Triphenylphosphate	106	%		1
	EPA 521 - Nitrosamines by GCMS							
10/2/2009	10/08/2009 16:34	527284	(EPA 521)	N-Nitroso dimethylamine (NDMA)	240	ng/l	10	5
10/2/2009	10/08/2009 16:34	527284	(EPA 521)	NDMA-D6	81	%		1

Laboratory Data
Report: 315720

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
09/30/2009

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
		MWH_MET - NTA and EDTA by Ion Chromatography							
	10/02/2009	21:25	526997	(MWH_MET)	EDTA	ND	mg/L	0.1	1
		MWH PFC - Perfluorinated compounds							
	10/16/2009	10:28	527956	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	40	2
	10/16/2009	10:28	527956	(MWH PFC)	Perfluoro octanesulfonate-PFOS	87	ng/L	10	2
	10/16/2009	10:28	527956	(MWH PFC)	Perfluoro octanoic acid - PFOA	100	ng/L	10	2
	10/16/2009	10:28	527956	(MWH PFC)	PFBA-C13	102	%		1
	10/16/2009	10:28	527956	(MWH PFC)	PFOA-C13	97	%		1
	10/16/2009	10:28	527956	(MWH PFC)	PFOS-C13	59	%		1

MWH
LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
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1 800 566 LABS (1 800 566 5227)

Laboratory Comments
Report: #315720

Locus Technologies
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Flags Legend:

R4 - MS/MSD RPD exceeded the method acceptance limit. Recovery met acceptance criteria.

Report revised to correct the results reported below the current MRL of 20 ng/L. YOM 102609

The Comments Report may be blank if there are no comments for this report.

Locus Technologies

QC Ref # 526425 - Semivolatiles by GCMS **Analysis Date: 10/02/2009**

200909300035	Source	Analyzed by: JWC

QC Ref # 526737 - Nitrosamines by GCMS **Analysis Date: 10/07/2009**

200909300030	L-10 Composite	Analyzed by: KAM
200909300031	MW-1	Analyzed by: KAM
200909300032	MW-2	Analyzed by: KAM
200909300033	MW-3	Analyzed by: KAM
200909300034	MW-4	Analyzed by: KAM

QC Ref # 526997 - NTA and EDTA by Ion Chromatography **Analysis Date: 10/02/2009**

200909300035	Source	Analyzed by: DYM

QC Ref # 527284 - Nitrosamines by GCMS **Analysis Date: 10/08/2009**

200909300035	Source	Analyzed by: KAM

QC Ref # 527627 - Perfluorinated compounds **Analysis Date: 10/09/2009**

200909300030	L-10 Composite	Analyzed by: LHZ
200909300031	MW-1	Analyzed by: LHZ
200909300032	MW-2	Analyzed by: LHZ
200909300034	MW-4	Analyzed by: LHZ

QC Ref # 527956 - Perfluorinated compounds **Analysis Date: 10/16/2009**

200909300035	Source	Analyzed by: LHZ

QC Ref # 527973 - Perfluorinated compounds **Analysis Date: 10/15/2009**

200909300033	MW-3	Analyzed by: LHZ

QC Ref# 526425 - Semivolatiles by GCMS by EPA 525.2 Analysis Date: 10/02/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,3-Dimethyl-2-nitrobenzene (S)			92.1	%	92	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)			94.5	%	95	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			97.0	%	97	(70-130)		
MRL_CHK	1,3-Dimethyl-2-nitrobenzene (S)			92.9	%	93	(70-130)		
MRLHI	1,3-Dimethyl-2-nitrobenzene (S)			96.2	%	96	(70-130)		
MRLLW	1,3-Dimethyl-2-nitrobenzene (S)			97.6	%	98	(70-130)		
MS_200909300157	1,3-Dimethyl-2-nitrobenzene (S)			93.6	%	94	(70-130)		
LCS1	2,4-Dinitrotoluene		2.0	1.83	ug/L	91	(70-130)		
LCS2	2,4-Dinitrotoluene		2.0	1.76	ug/L	88	(70-130)	20	3.9
MBLK	2,4-Dinitrotoluene			<0.05	ug/L				
MRL_CHK	2,4-Dinitrotoluene		0.1	0.0870	ug/L	87	(50-150)		
MRLHI	2,4-Dinitrotoluene		0.1	0.0900	ug/L	90	(50-150)		
MS_200909300157	2,4-Dinitrotoluene		2.0	1.75	ug/L	88	(70-130)		
LCS1	2,6-Dinitrotoluene		2.0	1.82	ug/L	91	(70-130)		
LCS2	2,6-Dinitrotoluene		2.0	1.8	ug/L	90	(70-130)	20	1.1
MBLK	2,6-Dinitrotoluene			<0.05	ug/L				
MRL_CHK	2,6-Dinitrotoluene		0.1	0.0790	ug/L	79	(50-150)		
MRLHI	2,6-Dinitrotoluene		0.1	0.0890	ug/L	89	(50-150)		
MS_200909300157	2,6-Dinitrotoluene		2.0	1.83	ug/L	92	(70-130)		
LCS1	4,4-DDD		2.0	1.98	ug/L	99	(70-130)		
LCS2	4,4-DDD		2.0	1.97	ug/L	99	(70-130)	20	0.51
MBLK	4,4-DDD			<0.05	ug/L				
MRL_CHK	4,4-DDD		0.1	0.0810	ug/L	81	(50-150)		
MRLHI	4,4-DDD		0.1	0.0960	ug/L	96	(50-150)		
MS_200909300157	4,4-DDD		2.0	1.91	ug/L	96	(70-130)		
LCS1	4,4-DDE		2.0	1.78	ug/L	89	(70-130)		
LCS2	4,4-DDE		2.0	1.68	ug/L	84	(70-130)	20	5.8
MBLK	4,4-DDE			<0.05	ug/L				
MRL_CHK	4,4-DDE		0.1	0.0780	ug/L	78	(50-150)		
MRLHI	4,4-DDE		0.1	0.0790	ug/L	79	(50-150)		
MS_200909300157	4,4-DDE		2.0	1.65	ug/L	82	(70-130)		
LCS1	4,4-DDT		2.0	1.89	ug/L	95	(70-130)		
LCS2	4,4-DDT		2.0	1.91	ug/L	95	(70-130)	20	1.1
MBLK	4,4-DDT			<0.05	ug/L				
MRL_CHK	4,4-DDT		0.1	0.114	ug/L	114	(50-150)		
MRLHI	4,4-DDT		0.1	0.102	ug/L	102	(50-150)		
MS_200909300157	4,4-DDT		2.0	1.83	ug/L	92	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Acenaphthene		2.0	1.86	ug/L	93	(70-130)		
LCS2	Acenaphthene		2.0	1.83	ug/L	91	(70-130)	20	1.6
MBLK	Acenaphthene			<0.05	ug/L				
MRL_CHK	Acenaphthene		0.1	0.0910	ug/L	91	(50-150)		
MRLHI	Acenaphthene		0.1	0.0990	ug/L	99	(50-150)		
MS_200909300157	Acenaphthene		2.0	1.85	ug/L	93	(70-130)		
LCS1	Acenaphthene-d10 (I)			93.3	%	93	(50-150)		
LCS2	Acenaphthene-d10 (I)			95.3	%	95	(50-150)		
MBLK	Acenaphthene-d10 (I)			91.4	%	91	(50-150)		
MRL_CHK	Acenaphthene-d10 (I)			89.1	%	89	(50-150)		
MRLHI	Acenaphthene-d10 (I)			91.7	%	92	(50-150)		
MRLLW	Acenaphthene-d10 (I)			87.3	%	87	(50-150)		
MS_200909300157	Acenaphthene-d10 (I)			88.2	%	88	(50-150)		
LCS1	Acenaphthylene		2.0	1.94	ug/L	97	(70-130)		
LCS2	Acenaphthylene		2.0	1.81	ug/L	91	(70-130)	20	6.9
MBLK	Acenaphthylene			<0.05	ug/L				
MRL_CHK	Acenaphthylene		0.1	0.0850	ug/L	85	(50-150)		
MRLHI	Acenaphthylene		0.1	0.0770	ug/L	77	(50-150)		
MS_200909300157	Acenaphthylene		2.0	1.91	ug/L	96	(70-130)		
LCS1	Acetochlor		2.0	2.00	ug/L	100	(70-130)		
LCS2	Acetochlor		2.0	2.01	ug/L	100	(70-130)	20	0.50
MBLK	Acetochlor			<0.05	ug/L				
MRL_CHK	Acetochlor		0.05	0.0510	ug/L	102	(50-150)		
MRLHI	Acetochlor		0.1	0.110	ug/L	110	(50-150)		
MS_200909300157	Acetochlor		2.0	1.94	ug/L	97	(70-130)		
LCS1	Alachlor		2.0	2.00	ug/L	100	(70-130)		
LCS2	Alachlor		2.0	1.93	ug/L	97	(70-130)	20	3.6
MBLK	Alachlor			<0.025	ug/L				
MRL_CHK	Alachlor		0.05	0.0500	ug/L	100	(50-150)		
MRLHI	Alachlor		0.1	0.0980	ug/L	98	(50-150)		
MS_200909300157	Alachlor		2.0	1.91	ug/L	96	(70-130)		
LCS1	Aldrin		2.0	1.58	ug/L	79	(70-130)		
LCS2	Aldrin		2.0	1.45	ug/L	72	(70-130)	20	8.6
MBLK	Aldrin			<0.025	ug/L				
MRL_CHK	Aldrin		0.05	0.0580	ug/L	116	(50-150)		
MRLHI	Aldrin		0.1	0.0880	ug/L	88	(50-150)		
MS_200909300157	Aldrin		2.0	1.55	ug/L	78	(70-130)		
LCS1	Alpha-BHC		2.0	1.94	ug/L	97	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Alpha-BHC		2.0	1.94	ug/L	97	(70-130)	20	0.0
MBLK	Alpha-BHC			<0.05	ug/L				
MRL_CHK	Alpha-BHC		0.1	0.0870	ug/L	87	(50-150)		
MRLHI	Alpha-BHC		0.1	0.102	ug/L	102	(50-150)		
MS_200909300157	Alpha-BHC		2.0	1.91	ug/L	95	(70-130)		
LCS1	alpha-Chlordane		2.0	1.92	ug/L	96	(70-130)		
LCS2	alpha-Chlordane		2.0	1.92	ug/L	96	(70-130)	20	0.0
MBLK	alpha-Chlordane			<0.025	ug/L				
MRL_CHK	alpha-Chlordane		0.05	0.0320	ug/L	64	(50-150)		
MRLHI	alpha-Chlordane		0.1	0.0880	ug/L	88	(50-150)		
MS_200909300157	alpha-Chlordane		2.0	1.88	ug/L	94	(70-130)		
LCS1	Anthracene		2.0	1.88	ug/L	94	(70-130)		
LCS2	Anthracene		2.0	1.85	ug/L	92	(70-130)	20	1.6
MBLK	Anthracene			<0.01	ug/L				
MRL_CHK	Anthracene		0.02	0.0160	ug/L	80	(50-150)		
MRLHI	Anthracene		0.1	0.0910	ug/L	91	(50-150)		
MRLLW	Anthracene		0.02	0.0200	ug/L	100	(50-150)		
MS_200909300157	Anthracene		2.0	1.36	ug/L	**68**	(70-130)		
LCS1	Atrazine		2.0	2.03	ug/L	101	(70-130)		
LCS2	Atrazine		2.0	2.05	ug/L	102	(70-130)	20	0.98
MBLK	Atrazine			<0.025	ug/L				
MRL_CHK	Atrazine		0.05	0.0550	ug/L	110	(50-150)		
MRLHI	Atrazine		0.1	0.0960	ug/L	96	(50-150)		
MS_200909300157	Atrazine	ND	2.0	2.09	ug/L	104	(70-130)		
LCS1	Benz(a)Anthracene		2.0	1.84	ug/L	92	(70-130)		
LCS2	Benz(a)Anthracene		2.0	1.87	ug/L	94	(70-130)	20	1.6
MBLK	Benz(a)Anthracene			<0.025	ug/L				
MRL_CHK	Benz(a)Anthracene		0.05	0.0450	ug/L	90	(50-150)		
MRLHI	Benz(a)Anthracene		0.1	0.0960	ug/L	96	(50-150)		
MS_200909300157	Benz(a)Anthracene		2.0	1.75	ug/L	88	(70-130)		
LCS1	Benzo(a)pyrene		2.0	1.94	ug/L	97	(70-130)		
LCS2	Benzo(a)pyrene		2.0	1.98	ug/L	99	(70-130)	20	2.0
MBLK	Benzo(a)pyrene			<0.01	ug/L				
MRL_CHK	Benzo(a)pyrene		0.02	0.0160	ug/L	80	(50-150)		
MRLHI	Benzo(a)pyrene		0.1	0.0850	ug/L	85	(50-150)		
MRLLW	Benzo(a)pyrene		0.02	0.0180	ug/L	90	(50-150)		
MS_200909300157	Benzo(a)pyrene	ND	2.0	1.83	ug/L	91	(70-130)		
LCS1	Benzo(b)Fluoranthene		2.0	1.96	ug/L	98	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Benzo(b)Fluoranthene		2.0	1.97	ug/L	99	(70-130)	20	0.51
MBLK	Benzo(b)Fluoranthene			<0.01	ug/L				
MRL_CHK	Benzo(b)Fluoranthene		0.02	0.0200	ug/L	100	(50-150)		
MRLHI	Benzo(b)Fluoranthene		0.1	0.0940	ug/L	94	(50-150)		
MRLLW	Benzo(b)Fluoranthene		0.02	0.0220	ug/L	110	(50-150)		
MS_200909300157	Benzo(b)Fluoranthene		2.0	1.96	ug/L	98	(70-130)		
LCS1	Benzo(g,h,i)Perylene		2.0	1.93	ug/L	97	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2.0	2.01	ug/L	100	(70-130)	20	4.1
MBLK	Benzo(g,h,i)Perylene			<0.025	ug/L				
MRL_CHK	Benzo(g,h,i)Perylene		0.05	0.0390	ug/L	78	(50-150)		
MRLHI	Benzo(g,h,i)Perylene		0.1	0.0830	ug/L	83	(50-150)		
MS_200909300157	Benzo(g,h,i)Perylene		2.0	1.82	ug/L	91	(70-130)		
LCS1	Benzo(k)Fluoranthene		2.0	2.06	ug/L	103	(70-130)		
LCS2	Benzo(k)Fluoranthene		2.0	2.12	ug/L	106	(70-130)	20	2.4
MBLK	Benzo(k)Fluoranthene			<0.01	ug/L				
MRL_CHK	Benzo(k)Fluoranthene		0.02	0.0190	ug/L	95	(50-150)		
MRLHI	Benzo(k)Fluoranthene		0.1	0.0950	ug/L	95	(50-150)		
MRLLW	Benzo(k)Fluoranthene		0.02	0.0180	ug/L	90	(50-150)		
MS_200909300157	Benzo(k)Fluoranthene		2.0	2.01	ug/L	101	(70-130)		
LCS1	Beta-BHC		2.0	1.99	ug/L	99	(70-130)		
LCS2	Beta-BHC		2.0	1.98	ug/L	99	(70-130)	20	0.50
MBLK	Beta-BHC			<0.05	ug/L				
MRL_CHK	Beta-BHC		0.1	0.0960	ug/L	96	(50-150)		
MRLHI	Beta-BHC		0.1	0.102	ug/L	102	(50-150)		
MS_200909300157	Beta-BHC		2.0	2.03	ug/L	101	(70-130)		
LCS1	Bromacil		2.0	1.96	ug/L	98	(70-130)		
LCS2	Bromacil		2.0	1.98	ug/L	99	(70-130)	20	1.0
MBLK	Bromacil			<0.05	ug/L				
MRL_CHK	Bromacil		0.1	0.0850	ug/L	85	(50-150)		
MRLHI	Bromacil		0.1	0.102	ug/L	102	(50-150)		
MS_200909300157	Bromacil		2.0	1.96	ug/L	98	(70-130)		
LCS1	Butachlor		2.0	1.98	ug/L	99	(70-130)		
LCS2	Butachlor		2.0	2.00	ug/L	100	(70-130)	20	1.0
MBLK	Butachlor			<0.025	ug/L				
MRL_CHK	Butachlor		0.05	0.0480	ug/L	96	(50-150)		
MRLHI	Butachlor		0.1	0.0850	ug/L	85	(50-150)		
MS_200909300157	Butachlor		2.0	1.98	ug/L	99	(70-130)		
LCS1	Butylbenzylphthalate		2.0	1.9	ug/L	95	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Butylbenzylphthalate		2.0	1.94	ug/L	97	(70-130)	20	2.1
MBLK	Butylbenzylphthalate			<0.15	ug/L				
MRL_CHK	Butylbenzylphthalate		0.15	0.146	ug/L	97	(50-150)		
MRLHI	Butylbenzylphthalate		0.3	0.286	ug/L	95	(50-150)		
MS_200909300157	Butylbenzylphthalate		2.0	1.87	ug/L	94	(70-130)		
LCS1	Caffeine by method 525mod		2.0	1.61	ug/L	81	(45-137)		
LCS2	Caffeine by method 525mod		2.0	1.65	ug/L	82	(45-137)	20	2.5
MBLK	Caffeine by method 525mod			<0.01	ug/L				
MRL_CHK	Caffeine by method 525mod		0.05	0.0450	ug/L	90	(50-150)		
MRLHI	Caffeine by method 525mod		0.1	0.0800	ug/L	80	(50-150)		
MS_200909300157	Caffeine by method 525mod		2.0	1.67	ug/L	83	(46-144)		
LCS1	Chlorobenzilate		2.0	1.98	ug/L	99	(70-130)		
LCS2	Chlorobenzilate		2.0	1.99	ug/L	100	(70-130)	20	0.50
MBLK	Chlorobenzilate			<0.05	ug/L				
MRL_CHK	Chlorobenzilate		0.1	0.0900	ug/L	90	(50-150)		
MRLHI	Chlorobenzilate		0.1	0.0910	ug/L	91	(50-150)		
MS_200909300157	Chlorobenzilate		2.0	1.97	ug/L	98	(70-130)		
LCS1	Chloroneb		2.0	1.97	ug/L	99	(70-130)		
LCS2	Chloroneb		2.0	1.91	ug/L	96	(70-130)	20	3.1
MBLK	Chloroneb			<0.05	ug/L				
MRL_CHK	Chloroneb		0.1	0.0950	ug/L	95	(50-150)		
MRLHI	Chloroneb		0.1	0.101	ug/L	101	(50-150)		
MS_200909300157	Chloroneb		2.0	1.89	ug/L	95	(70-130)		
LCS1	Chlorothalonil(Draconil,Bravo)		2.0	1.9	ug/L	95	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2.0	1.91	ug/L	95	(70-130)	20	0.53
MBLK	Chlorothalonil(Draconil,Bravo)			<0.05	ug/L				
MRL_CHK	Chlorothalonil(Draconil,Bravo)		0.05	0.0480	ug/L	96	(50-150)		
MRLHI	Chlorothalonil(Draconil,Bravo)		0.1	0.0970	ug/L	97	(50-150)		
MS_200909300157	Chlorothalonil(Draconil,Bravo)		2.0	1.84	ug/L	92	(70-130)		
LCS1	Chlorpyrifos (Dursban)		2.0	2.01	ug/L	101	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2.0	1.98	ug/L	99	(70-130)	20	1.5
MBLK	Chlorpyrifos (Dursban)			<0.025	ug/L				
MRL_CHK	Chlorpyrifos (Dursban)		0.05	0.0530	ug/L	106	(50-150)		
MRLHI	Chlorpyrifos (Dursban)		0.1	0.0920	ug/L	92	(50-150)		
MS_200909300157	Chlorpyrifos (Dursban)		2.0	1.96	ug/L	98	(70-130)		
LCS1	Chrysene		2.0	2.04	ug/L	102	(70-130)		
LCS2	Chrysene		2.0	2.02	ug/L	101	(70-130)	20	0.99
MBLK	Chrysene			<0.01	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	Chrysene		0.02	0.0160	ug/L	80	(50-150)		
MRLHI	Chrysene		0.1	0.101	ug/L	101	(50-150)		
MRLLW	Chrysene		0.02	0.0210	ug/L	105	(50-150)		
MS_200909300157	Chrysene		2.0	1.98	ug/L	99	(70-130)		
LCS1	Chrysene-d12 (I)			95.6	%	96	(50-150)		
LCS2	Chrysene-d12 (I)			99.0	%	99	(50-150)		
MBLK	Chrysene-d12 (I)			88.5	%	89	(50-150)		
MRL_CHK	Chrysene-d12 (I)			83.2	%	83	(50-150)		
MRLHI	Chrysene-d12 (I)			91.7	%	92	(50-150)		
MRLLW	Chrysene-d12 (I)			81.1	%	81	(50-150)		
MS_200909300157	Chrysene-d12 (I)			89.0	%	89	(50-150)		
LCS1	Delta-BHC		2.0	1.88	ug/L	94	(70-130)		
LCS2	Delta-BHC		2.0	1.87	ug/L	94	(70-130)	20	0.53
MBLK	Delta-BHC			<0.05	ug/L				
MRL_CHK	Delta-BHC		0.1	0.0770	ug/L	77	(50-150)		
MRLHI	Delta-BHC		0.1	0.0980	ug/L	98	(50-150)		
MS_200909300157	Delta-BHC		2.0	1.81	ug/L	91	(70-130)		
LCS1	Di(2-Ethylhexyl)phthalate		2.0	1.91	ug/L	95	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2.0	1.99	ug/L	100	(70-130)	20	4.1
MBLK	Di(2-Ethylhexyl)phthalate			<0.15	ug/L				
MRL_CHK	Di(2-Ethylhexyl)phthalate		0.3	0.288	ug/L	96	(50-150)		
MRLHI	Di(2-Ethylhexyl)phthalate		0.3	0.306	ug/L	102	(50-150)		
MS_200909300157	Di(2-Ethylhexyl)phthalate	ND	2.0	2.02	ug/L	101	(70-130)		
LCS1	Di-(2-Ethylhexyl)adipate		2.0	1.69	ug/L	85	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2.0	1.75	ug/L	88	(70-130)	20	3.5
MBLK	Di-(2-Ethylhexyl)adipate			<0.15	ug/L				
MRL_CHK	Di-(2-Ethylhexyl)adipate		0.3	0.301	ug/L	100	(50-150)		
MRLHI	Di-(2-Ethylhexyl)adipate		0.3	0.293	ug/L	98	(50-150)		
MS_200909300157	Di-(2-Ethylhexyl)adipate	ND	2.0	1.66	ug/L	83	(70-130)		
LCS1	Di-n-Butylphthalate		4.0	3.94	ug/L	99	(70-130)		
LCS2	Di-n-Butylphthalate		4.0	3.91	ug/L	98	(70-130)	20	0.76
MBLK	Di-n-Butylphthalate			<0.15	ug/L				
MRL_CHK	Di-n-Butylphthalate		0.3	0.307	ug/L	102	(50-150)		
MRLHI	Di-n-Butylphthalate		0.4	0.425	ug/L	106	(50-150)		
MS_200909300157	Di-n-Butylphthalate		4.0	3.96	ug/L	99	(70-130)		
LCS1	Di-N-octylphthalate		2.0	1.78	ug/L	89	(70-130)		
LCS2	Di-N-octylphthalate		2.0	1.8	ug/L	90	(70-130)	20	1.1
MBLK	Di-N-octylphthalate			<0.05	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	Di-N-octylphthalate		0.1	0.0910	ug/L	91	(50-150)		
MRLHI	Di-N-octylphthalate		0.1	0.0970	ug/L	97	(50-150)		
MS_200909300157	Di-N-octylphthalate		2.0	1.71	ug/L	85	(70-130)		
LCS1	Diazinon (Qualitative)		2.0	2.08	ug/L	104	(70-130)		
LCS2	Diazinon (Qualitative)		2.0	2.01	ug/L	101	(70-130)	20	3.4
MBLK	Diazinon (Qualitative)			<0.05	ug/L				
MRL_CHK	Diazinon (Qualitative)		0.1	0.0930	ug/L	93	(50-150)		
MRLHI	Diazinon (Qualitative)		0.1	0.100	ug/L	100	(50-150)		
MS_200909300157	Diazinon (Qualitative)		2.0	2.05	ug/L	103	(70-130)		
LCS1	Dibenz(a,h)Anthracene		2.0	1.92	ug/L	96	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2.0	2.01	ug/L	100	(70-130)	20	4.6
MBLK	Dibenz(a,h)Anthracene			<0.025	ug/L				
MRL_CHK	Dibenz(a,h)Anthracene		0.05	0.0420	ug/L	84	(50-150)		
MRLHI	Dibenz(a,h)Anthracene		0.1	0.0860	ug/L	86	(50-150)		
MS_200909300157	Dibenz(a,h)Anthracene		2.0	1.75	ug/L	87	(70-130)		
LCS1	Dichlorvos (DDVP)		2.0	1.95	ug/L	97	(70-130)		
LCS2	Dichlorvos (DDVP)		2.0	1.92	ug/L	96	(70-130)	20	1.6
MBLK	Dichlorvos (DDVP)			<0.025	ug/L				
MRL_CHK	Dichlorvos (DDVP)		0.05	0.0370	ug/L	74	(50-150)		
MRLHI	Dichlorvos (DDVP)		0.1	0.102	ug/L	102	(50-150)		
MS_200909300157	Dichlorvos (DDVP)		2.0	1.94	ug/L	97	(70-130)		
LCS1	Dieldrin		2.0	1.84	ug/L	92	(70-130)		
LCS2	Dieldrin		2.0	1.83	ug/L	92	(70-130)	20	0.55
MBLK	Dieldrin			<0.05	ug/L				
MRL_CHK	Dieldrin		0.1	0.0700	ug/L	70	(50-150)		
MRLHI	Dieldrin		0.1	0.0870	ug/L	87	(50-150)		
MS_200909300157	Dieldrin		2.0	1.82	ug/L	91	(70-130)		
LCS1	Diethylphthalate		2.0	2.04	ug/L	102	(70-130)		
LCS2	Diethylphthalate		2.0	2.01	ug/L	100	(70-130)	20	1.5
MBLK	Diethylphthalate			<0.15	ug/L				
MRL_CHK	Diethylphthalate		0.15	0.162	ug/L	108	(50-150)		
MRLHI	Diethylphthalate		0.3	0.321	ug/L	107	(50-150)		
MS_200909300157	Diethylphthalate		2.0	2.02	ug/L	101	(70-130)		
LCS1	Dimethoate		2.0	1.63	ug/L	82	(35-100)		
LCS2	Dimethoate		2.0	1.55	ug/L	78	(35-100)	20	5.0
MBLK	Dimethoate			<0.05	ug/L				
MRL_CHK	Dimethoate		0.1	0.0720	ug/L	72	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Dimethoate		0.1	0.0720	ug/L	72	(50-150)		
MS_200909300157	Dimethoate		2.0	1.56	ug/L	78	(34-111)		
LCS1	Dimethylphthalate		2.0	2.00	ug/L	100	(70-130)		
LCS2	Dimethylphthalate		2.0	1.91	ug/L	96	(70-130)	20	4.6
MBLK	Dimethylphthalate			<0.15	ug/L				
MRL_CHK	Dimethylphthalate		0.3	0.302	ug/L	101	(50-150)		
MRLHI	Dimethylphthalate		0.3	0.292	ug/L	97	(50-150)		
MS_200909300157	Dimethylphthalate		2.0	1.93	ug/L	97	(70-130)		
LCS1	Endosulfan I (Alpha)		2.0	1.99	ug/L	100	(70-130)		
LCS2	Endosulfan I (Alpha)		2.0	2.1	ug/L	105	(70-130)	20	5.4
MBLK	Endosulfan I (Alpha)			<0.05	ug/L				
MRL_CHK	Endosulfan I (Alpha)		0.1	0.0790	ug/L	79	(50-150)		
MRLHI	Endosulfan I (Alpha)		0.1	0.0930	ug/L	93	(50-150)		
MS_200909300157	Endosulfan I (Alpha)		2.0	2.00	ug/L	100	(70-130)		
LCS1	Endosulfan II (Beta)		2.0	1.89	ug/L	95	(70-130)		
LCS2	Endosulfan II (Beta)		2.0	1.94	ug/L	97	(70-130)	20	2.6
MBLK	Endosulfan II (Beta)			<0.05	ug/L				
MRL_CHK	Endosulfan II (Beta)		0.1	0.107	ug/L	107	(50-150)		
MRLHI	Endosulfan II (Beta)		0.1	0.115	ug/L	115	(50-150)		
MS_200909300157	Endosulfan II (Beta)		2.0	1.76	ug/L	88	(70-130)		
LCS1	Endosulfan Sulfate		2.0	2.01	ug/L	100	(70-130)		
LCS2	Endosulfan Sulfate		2.0	2.00	ug/L	100	(70-130)	20	0.0
MBLK	Endosulfan Sulfate			<0.05	ug/L				
MRL_CHK	Endosulfan Sulfate		0.1	0.103	ug/L	103	(50-150)		
MRLHI	Endosulfan Sulfate		0.1	0.107	ug/L	107	(50-150)		
MS_200909300157	Endosulfan Sulfate		2.0	2.03	ug/L	101	(70-130)		
LCS1	Endrin		2.0	1.98	ug/L	99	(70-130)		
LCS2	Endrin		2.0	2.05	ug/L	103	(70-130)	20	3.5
MBLK	Endrin			<0.05	ug/L				
MRL_CHK	Endrin		0.1	0.107	ug/L	107	(50-150)		
MRLHI	Endrin		0.1	0.129	ug/L	129	(50-150)		
MS_200909300157	Endrin		2.0	2.02	ug/L	101	(70-130)		
LCS1	Endrin Aldehyde		2.0	1.81	ug/L	90	(70-130)		
LCS2	Endrin Aldehyde		2.0	1.86	ug/L	93	(70-130)	20	2.7
MBLK	Endrin Aldehyde			<0.05	ug/L				
MRL_CHK	Endrin Aldehyde		0.1	0.142	ug/L	142	(50-150)		
MRLHI	Endrin Aldehyde		0.1	0.110	ug/L	110	(50-150)		
MS_200909300157	Endrin Aldehyde		2.0	1.76	ug/L	88	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	EPTC		2.0	1.89	ug/L	95	(70-130)		
LCS2	EPTC		2.0	1.94	ug/L	97	(70-130)	20	2.6
MBLK	EPTC			<0.05	ug/L				
MRL_CHK	EPTC		0.1	0.0990	ug/L	99	(50-150)		
MRLHI	EPTC		0.1	0.0960	ug/L	96	(50-150)		
MS_200909300157	EPTC		2.0	1.89	ug/L	95	(70-130)		
LCS1	Fluoranthene		2.0	1.91	ug/L	96	(70-130)		
LCS2	Fluoranthene		2.0	1.91	ug/L	96	(70-130)	20	0.0
MBLK	Fluoranthene			<0.05	ug/L				
MRL_CHK	Fluoranthene		0.05	0.0480	ug/L	96	(50-150)		
MRLHI	Fluoranthene		0.1	0.0920	ug/L	92	(50-150)		
MS_200909300157	Fluoranthene		2.0	1.91	ug/L	96	(70-130)		
LCS1	Fluorene		2.0	2.03	ug/L	101	(70-130)		
LCS2	Fluorene		2.0	1.99	ug/L	99	(70-130)	20	2.0
MBLK	Fluorene			<0.05	ug/L				
MRL_CHK	Fluorene		0.05	0.0480	ug/L	96	(50-150)		
MRLHI	Fluorene		0.1	0.106	ug/L	106	(50-150)		
MS_200909300157	Fluorene		2.0	2.00	ug/L	100	(70-130)		
LCS1	gamma-Chlordane		2.0	1.8	ug/L	90	(70-130)		
LCS2	gamma-Chlordane		2.0	1.9	ug/L	95	(70-130)	20	5.4
MBLK	gamma-Chlordane			<0.025	ug/L				
MRL_CHK	gamma-Chlordane		0.05	0.0340	ug/L	68	(50-150)		
MRLHI	gamma-Chlordane		0.1	0.0950	ug/L	95	(50-150)		
MS_200909300157	gamma-Chlordane		2.0	1.89	ug/L	94	(70-130)		
LCS1	Heptachlor		2.0	1.92	ug/L	96	(70-130)		
LCS2	Heptachlor		2.0	1.91	ug/L	96	(70-130)	20	0.52
MBLK	Heptachlor			<0.015	ug/L				
MRL_CHK	Heptachlor		0.04	0.0350	ug/L	88	(50-150)		
MRLHI	Heptachlor		0.1	0.0910	ug/L	91	(50-150)		
MRLLW	Heptachlor		0.02	0.0170	ug/L	85	(50-150)		
MS_200909300157	Heptachlor		2.0	1.9	ug/L	95	(70-130)		
LCS1	Heptachlor Epoxide (isomer B)		2.0	1.84	ug/L	92	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2.0	1.83	ug/L	91	(70-130)	20	0.55
MBLK	Heptachlor Epoxide (isomer B)			<0.025	ug/L				
MRL_CHK	Heptachlor Epoxide (isomer B)		0.05	0.0450	ug/L	90	(50-150)		
MRLHI	Heptachlor Epoxide (isomer B)		0.1	0.112	ug/L	112	(50-150)		
MS_200909300157	Heptachlor Epoxide (isomer B)		2.0	1.92	ug/L	96	(70-130)		
LCS1	Hexachlorobenzene		2.0	1.9	ug/L	95	(70-130)		

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Hexachlorobenzene		2.0	1.89	ug/L	95	(70-130)	20	0.53
MBLK	Hexachlorobenzene			<0.025	ug/L				
MRL_CHK	Hexachlorobenzene		0.05	0.0530	ug/L	106	(50-150)		
MRLHI	Hexachlorobenzene		0.3	0.291	ug/L	97	(50-150)		
MRLLW	Hexachlorobenzene		0.06	0.0650	ug/L	108	(50-150)		
MS_200909300157	Hexachlorobenzene	ND	2.0	1.91	ug/L	96	(70-130)		
LCS1	Hexachlorocyclopentadiene		2.0	1.91	ug/L	95	(70-130)		
LCS2	Hexachlorocyclopentadiene		2.0	1.92	ug/L	96	(70-130)	20	0.52
MBLK	Hexachlorocyclopentadiene			<0.025	ug/L				
MRL_CHK	Hexachlorocyclopentadiene		0.05	0.0550	ug/L	110	(50-150)		
MRLHI	Hexachlorocyclopentadiene		0.3	0.256	ug/L	85	(50-150)		
MRLLW	Hexachlorocyclopentadiene		0.06	0.0630	ug/L	105	(50-150)		
MS_200909300157	Hexachlorocyclopentadiene	ND	2.0	2.04	ug/L	102	(70-130)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2.0	1.94	ug/L	97	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2.0	1.98	ug/L	99	(70-130)	20	2.0
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.025	ug/L				
MRL_CHK	Indeno(1,2,3,c,d)Pyrene		0.05	0.0370	ug/L	74	(50-150)		
MRLHI	Indeno(1,2,3,c,d)Pyrene		0.1	0.0840	ug/L	84	(50-150)		
MS_200909300157	Indeno(1,2,3,c,d)Pyrene		2.0	1.82	ug/L	91	(70-130)		
LCS1	Isophorone		2.0	1.85	ug/L	93	(70-130)		
LCS2	Isophorone		2.0	1.84	ug/L	92	(70-130)	20	0.54
MBLK	Isophorone			<0.25	ug/L				
MRL_CHK	Isophorone		0.1	0.113	ug/L	113	(50-150)		
MRLHI	Isophorone		0.1	0.0990	ug/L	99	(50-150)		
MS_200909300157	Isophorone		2.0	1.83	ug/L	92	(70-130)		
LCS1	Lindane		2.0	1.99	ug/L	100	(70-130)		
LCS2	Lindane		2.0	1.93	ug/L	97	(70-130)	20	3.1
MBLK	Lindane			<0.02	ug/L				
MRL_CHK	Lindane		0.04	0.0410	ug/L	103	(50-150)		
MRLHI	Lindane		0.1	0.115	ug/L	115	(50-150)		
MRLLW	Lindane		0.02	0.0270	ug/L	135	(50-150)		
MS_200909300157	Lindane		2.0	1.94	ug/L	97	(70-130)		
LCS1	Malathion		2.0	2.06	ug/L	103	(70-130)		
LCS2	Malathion		2.0	2.04	ug/L	102	(70-130)	20	0.98
MBLK	Malathion			<0.05	ug/L				
MRL_CHK	Malathion		0.1	0.0960	ug/L	96	(50-150)		
MRLHI	Malathion		0.1	0.0920	ug/L	92	(50-150)		
MS_200909300157	Malathion		2.0	2.02	ug/L	101	(70-130)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Methoxychlor		2.0	2.03	ug/L	102	(70-130)		
LCS2	Methoxychlor		2.0	2.06	ug/L	103	(70-130)	20	1.5
MBLK	Methoxychlor			<0.05	ug/L				
MRL_CHK	Methoxychlor		0.1	0.107	ug/L	107	(50-150)		
MRLHI	Methoxychlor		0.1	0.118	ug/L	118	(50-150)		
MS_200909300157	Methoxychlor		2.0	2.09	ug/L	104	(70-130)		
LCS1	Metolachlor		2.0	2.02	ug/L	101	(70-130)		
LCS2	Metolachlor		2.0	1.98	ug/L	99	(70-130)	20	2.0
MBLK	Metolachlor			<0.025	ug/L				
MRL_CHK	Metolachlor		0.05	0.0460	ug/L	92	(50-150)		
MRLHI	Metolachlor		0.1	0.105	ug/L	105	(50-150)		
MS_200909300157	Metolachlor		2.0	1.93	ug/L	96	(70-130)		
LCS1	Metribuzin		2.0	2.04	ug/L	102	(70-130)		
LCS2	Metribuzin		2.0	2.04	ug/L	102	(70-130)	20	0.0
MBLK	Metribuzin			<0.05	ug/L				
MRL_CHK	Metribuzin		0.05	0.0500	ug/L	100	(50-150)		
MRLHI	Metribuzin		0.1	0.0980	ug/L	98	(50-150)		
MS_200909300157	Metribuzin		2.0	2.00	ug/L	100	(70-130)		
LCS1	Molinate		2.0	2.00	ug/L	100	(70-130)		
LCS2	Molinate		2.0	1.96	ug/L	98	(70-130)	20	2.0
MBLK	Molinate			<0.05	ug/L				
MRL_CHK	Molinate		0.1	0.0950	ug/L	95	(50-150)		
MRLHI	Molinate		0.1	0.103	ug/L	103	(50-150)		
MS_200909300157	Molinate	ND	2.0	2.00	ug/L	100	(70-130)		
LCS1	Naphthalene		2.0	1.81	ug/L	90	(70-130)		
LCS2	Naphthalene		2.0	1.84	ug/L	92	(70-130)	20	1.6
MBLK	Naphthalene			<0.05	ug/L				
MRL_CHK	Naphthalene		0.1	0.100	ug/L	100	(50-150)		
MRLHI	Naphthalene		0.1	0.100	ug/L	100	(50-150)		
MS_200909300157	Naphthalene		2.0	1.84	ug/L	92	(70-130)		
LCS1	Parathion		2.0	1.96	ug/L	98	(70-130)		
LCS2	Parathion		2.0	1.99	ug/L	100	(70-130)	20	1.5
MBLK	Parathion			<0.05	ug/L				
MRL_CHK	Parathion		0.1	0.106	ug/L	106	(50-150)		
MRLHI	Parathion		0.1	0.0920	ug/L	92	(50-150)		
MS_200909300157	Parathion		2.0	1.94	ug/L	97	(70-130)		
LCS1	Pendimethalin		2.0	1.91	ug/L	95	(70-130)		
LCS2	Pendimethalin		2.0	1.97	ug/L	98	(70-130)	20	3.1

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Pendimethalin			<0.05	ug/L				
MRL_CHK	Pendimethalin		0.1	0.0840	ug/L	84	(50-150)		
MRLHI	Pendimethalin		0.1	0.0920	ug/L	92	(50-150)		
MS_200909300157	Pendimethalin		2.0	1.95	ug/L	97	(70-130)		
LCS1	Pentachlorophenol		8.0	6.99	ug/L	87	(70-130)		
LCS2	Pentachlorophenol		8.0	6.66	ug/L	83	(70-130)	20	4.8
MBLK	Pentachlorophenol			<0.6	ug/L				
MRL_CHK	Pentachlorophenol		0.5	0.576	ug/L	115	(50-150)		
MRLHI	Pentachlorophenol		1.2	1.03	ug/L	86	(50-150)		
MS_200909300157	Pentachlorophenol		8.0	6.83	ug/L	85	(70-130)		
LCS1	Permethrin (mixed isomers)		4.0	3.69	ug/L	92	(70-130)		
LCS2	Permethrin (mixed isomers)		4.0	3.83	ug/L	96	(70-130)	20	3.7
MBLK	Permethrin (mixed isomers)			<0.1	ug/L				
MRL_CHK	Permethrin (mixed isomers)		0.15	0.210	ug/L	140	(50-150)		
MRLHI	Permethrin (mixed isomers)		0.2	0.210	ug/L	105	(50-150)		
MS_200909300157	Permethrin (mixed isomers)		4.0	3.71	ug/L	93	(70-130)		
LCS1	Perylene-d12 (S)			87.0	%	87	(70-130)		
LCS2	Perylene-d12 (S)			92.8	%	93	(70-130)		
MBLK	Perylene-d12 (S)			78.7	%	79	(70-130)		
MRL_CHK	Perylene-d12 (S)			71.8	%	72	(70-130)		
MRLHI	Perylene-d12 (S)			80.2	%	80	(70-130)		
MRLLW	Perylene-d12 (S)			73.0	%	73	(70-130)		
MS_200909300157	Perylene-d12 (S)			80.8	%	81	(70-130)		
LCS1	Phenanthrene		2.0	1.87	ug/L	94	(70-130)		
LCS2	Phenanthrene		2.0	1.85	ug/L	92	(70-130)	20	1.1
MBLK	Phenanthrene			<0.02	ug/L				
MRL_CHK	Phenanthrene		0.02	0.0200	ug/L	100	(50-150)		
MRLHI	Phenanthrene		0.1	0.0990	ug/L	99	(50-150)		
MRLLW	Phenanthrene		0.02	0.0220	ug/L	110	(50-150)		
MS_200909300157	Phenanthrene		2.0	1.81	ug/L	91	(70-130)		
LCS1	Phenanthrene-d10 (I)			101	%	101	(50-150)		
LCS2	Phenanthrene-d10 (I)			102	%	102	(50-150)		
MBLK	Phenanthrene-d10 (I)			97.0	%	97	(50-150)		
MRL_CHK	Phenanthrene-d10 (I)			93.3	%	93	(50-150)		
MRLHI	Phenanthrene-d10 (I)			97.4	%	97	(50-150)		
MRLLW	Phenanthrene-d10 (I)			90.6	%	91	(50-150)		
MS_200909300157	Phenanthrene-d10 (I)			96.0	%	96	(50-150)		
LCS1	Propachlor		2.0	2.03	ug/L	101	(70-130)		

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Propachlor		2.0	1.97	ug/L	99	(70-130)	20	3.0
MBLK	Propachlor			<0.025	ug/L				
MRL_CHK	Propachlor		0.05	0.0570	ug/L	114	(50-150)		
MRLHI	Propachlor		0.1	0.116	ug/L	116	(50-150)		
MS_200909300157	Propachlor		2.0	1.96	ug/L	98	(70-130)		
LCS1	Pyrene		2.0	1.92	ug/L	96	(70-130)		
LCS2	Pyrene		2.0	1.93	ug/L	96	(70-130)	20	0.52
MBLK	Pyrene			<0.025	ug/L				
MRL_CHK	Pyrene		0.05	0.0470	ug/L	94	(50-150)		
MRLHI	Pyrene		0.1	0.0930	ug/L	93	(50-150)		
MS_200909300157	Pyrene		2.0	1.91	ug/L	95	(70-130)		
LCS1	Simazine		2.0	2.1	ug/L	105	(70-130)		
LCS2	Simazine		2.0	2.08	ug/L	104	(70-130)	20	0.96
MBLK	Simazine			<0.025	ug/L				
MRL_CHK	Simazine		0.05	0.0450	ug/L	90	(50-150)		
MRLHI	Simazine		0.1	0.115	ug/L	115	(50-150)		
MS_200909300157	Simazine	ND	2.0	2.1	ug/L	105	(70-130)		
LCS1	Terbacil		2.0	1.9	ug/L	95	(70-130)		
LCS2	Terbacil		2.0	1.91	ug/L	96	(70-130)	20	0.53
MBLK	Terbacil			<0.05	ug/L				
MRL_CHK	Terbacil		0.1	0.112	ug/L	112	(50-150)		
MRLHI	Terbacil		0.1	0.0930	ug/L	93	(50-150)		
MS_200909300157	Terbacil		2.0	1.9	ug/L	95	(70-130)		
LCS1	Terbuthylazine		2.0	2.09	ug/L	105	(70-130)		
LCS2	Terbuthylazine		2.0	2.1	ug/L	105	(70-130)	20	0.95
MBLK	Terbuthylazine			<0.2	ug/L				
MRLHI	Terbuthylazine		0.1	0.0980	ug/L	98	(50-150)		
MS_200909300157	Terbuthylazine		2.0	2.13	ug/L	106	(70-130)		
LCS1	Thiobencarb		2.0	1.96	ug/L	98	(70-130)		
LCS2	Thiobencarb		2.0	1.96	ug/L	98	(70-130)	20	0.0
MBLK	Thiobencarb			<0.1	ug/L				
MRL_CHK	Thiobencarb		0.1	0.0910	ug/L	91	(50-150)		
MRLHI	Thiobencarb		0.1	0.0930	ug/L	93	(50-150)		
MS_200909300157	Thiobencarb	ND	2.0	1.97	ug/L	99	(70-130)		
LCS1	trans-Nonachlor		2.0	1.79	ug/L	89	(70-130)		
LCS2	trans-Nonachlor		2.0	1.86	ug/L	93	(70-130)	20	3.8
MBLK	trans-Nonachlor			<0.025	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	trans-Nonachlor		0.05	0.0470	ug/L	94	(50-150)		
MRLHI	trans-Nonachlor		0.1	0.0970	ug/L	97	(50-150)		
MS_200909300157	trans-Nonachlor		2.0	1.77	ug/L	89	(70-130)		
LCS1	Trifluralin		2.0	2.05	ug/L	102	(70-130)		
LCS2	Trifluralin		2.0	2.07	ug/L	103	(70-130)	20	0.97
MBLK	Trifluralin			<0.05	ug/L				
MRL_CHK	Trifluralin		0.1	0.0900	ug/L	90	(50-150)		
MRLHI	Trifluralin		0.1	0.107	ug/L	107	(50-150)		
MS_200909300157	Trifluralin		2.0	2.05	ug/L	102	(70-130)		
LCS1	Triphenylphosphate (S)			101	%	101	(70-130)		
LCS2	Triphenylphosphate (S)			104	%	104	(70-130)		
MBLK	Triphenylphosphate (S)			99.9	%	100	(70-130)		
MRL_CHK	Triphenylphosphate (S)			99.9	%	100	(70-130)		
MRLHI	Triphenylphosphate (S)			99.6	%	100	(70-130)		
MRLLW	Triphenylphosphate (S)			99.4	%	99	(70-130)		
MS_200909300157	Triphenylphosphate (S)			103	%	103	(70-130)		

QC Ref# 526737 - Nitrosamines by GCMS by EPA 521 **Analysis Date: 10/06/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
CCCH	N-Nitroso dimethylamine (NDMA)		100	75.5	ng/l	76	(70-130)		
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	1.41	ng/l	70	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	41.2	ng/l	103	(70-130)		
LCS2	N-Nitroso dimethylamine (NDMA)		80	60.7	ng/l	76	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/l				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	1.75	ng/l	87	(50-150)		
MS2_200909300032	N-Nitroso dimethylamine (NDMA)	ND	40	30.5	ng/l	73	(70-130)		
MSD2_200909300032	N-Nitroso dimethylamine (NDMA)	ND	40	37.6	ng/l	91	(70-130)	20	**22**
CCCH	N-Nitrosodi-n-propylamin(NDPA)		100	81.7	ng/l	82	(70-130)		
CCCL	N-Nitrosodi-n-propylamin(NDPA)		2.0	2.09	ng/l	104	(50-150)		
CCCM	N-Nitrosodi-n-propylamin(NDPA)		40	38.9	ng/l	97	(70-130)		
LCS2	N-Nitrosodi-n-propylamin(NDPA)			51.6	ng/l				
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/l				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2.0	1.25	ng/l	63	(50-150)		
MS2_200909300032	N-Nitrosodi-n-propylamin(NDPA)		40	23.9	ng/l	**60**	(70-130)		
MSD2_200909300032	N-Nitrosodi-n-propylamin(NDPA)		40	28.9	ng/l	72	(70-130)	30	19
CCCH	N-Nitrosodibutylamine (NDBA)		100	85.1	ng/l	85	(70-130)		
CCCL	N-Nitrosodibutylamine (NDBA)		2.0	1.8	ng/l	90	(50-150)		
CCCM	N-Nitrosodibutylamine (NDBA)		40	40.6	ng/l	102	(70-130)		
LCS2	N-Nitrosodibutylamine (NDBA)			61.6	ng/l				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/l				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2.0	1.86	ng/l	93	(50-150)		
MS2_200909300032	N-Nitrosodibutylamine (NDBA)		40	29.6	ng/l	74	(70-130)		
MSD2_200909300032	N-Nitrosodibutylamine (NDBA)		40	32.8	ng/l	82	(70-130)	30	10
CCCH	N-Nitrosodiethylamine (NDEA)		100	83.4	ng/l	83	(70-130)		
CCCL	N-Nitrosodiethylamine (NDEA)		2.0	1.53	ng/l	77	(50-150)		
CCCM	N-Nitrosodiethylamine (NDEA)		40	39.6	ng/l	99	(70-130)		
LCS2	N-Nitrosodiethylamine (NDEA)			60.2	ng/l				
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/l				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2.0	2.12	ng/l	106	(50-150)		
MS2_200909300032	N-Nitrosodiethylamine (NDEA)		40	28.0	ng/l	70	(70-130)		
MSD2_200909300032	N-Nitrosodiethylamine (NDEA)		40	35.3	ng/l	88	(70-130)	30	23
CCCH	N-Nitrosomethylethylamin(NMEA)		100	83.0	ng/l	83	(70-130)		
CCCL	N-Nitrosomethylethylamin(NMEA)		2.0	1.63	ng/l	82	(50-150)		
CCCM	N-Nitrosomethylethylamin(NMEA)		40	38.4	ng/l	96	(70-130)		
LCS2	N-Nitrosomethylethylamin(NMEA)			59.5	ng/l				
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/l				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2.0	1.62	ng/l	81	(50-150)		
MS2_200909300032	N-Nitrosomethylethylamin(NMEA)		40	28.1	ng/l	70	(70-130)		
MSD2_200909300032	N-Nitrosomethylethylamin(NMEA)		40	33.4	ng/l	84	(70-130)	20	17
CCCH	N-Nitrosopyrollidine (NPYR)		100	85.6	ng/l	86	(70-130)		
CCCL	N-Nitrosopyrollidine (NPYR)		2.0	1.81	ng/l	90	(50-150)		
CCCM	N-Nitrosopyrollidine (NPYR)		40	42.2	ng/l	105	(70-130)		
LCS2	N-Nitrosopyrollidine (NPYR)			59.2	ng/l				
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/l				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2.0	1.7	ng/l	85	(50-150)		
MS2_200909300032	N-Nitrosopyrollidine (NPYR)		40	29.1	ng/l	73	(70-130)		
MSD2_200909300032	N-Nitrosopyrollidine (NPYR)		40	37.5	ng/l	94	(70-130)	30	26
CCCH	NDMA-D6 (S)			87.3	%	87	(70-130)		
CCCL	NDMA-D6 (S)			82.5	%	83	(70-130)		
CCCM	NDMA-D6 (S)			87.7	%	88	(70-130)		
LCS2	NDMA-D6 (S)			83.0	%	83	(70-130)		
MBLK	NDMA-D6 (S)			90.0	%	90	(70-130)		
MRL_CHK	NDMA-D6 (S)			77.9	%	78	(70-130)		
MS2_200909300032	NDMA-D6 (S)			81.5	%	82	(70-130)		
MSD2_200909300032	NDMA-D6 (S)			97.3	%	97	(70-130)		

QC Ref# 526997 - NTA and EDTA by Ion Chromatography by MWH_MET **Analysis Date: 10/02/2009**

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	EDTA		0.5	0.498	mg/L	100	(80-120)		
LCS2	EDTA		0.5	0.497	mg/L	99	(80-120)	20	0.20
MBLK	EDTA			<0.1	mg/L				
MRL_CHK	EDTA		0.1	0.110	mg/L	110	(50-150)		
MS_200910010237	EDTA	ND	0.5	0.456	mg/L	91	(80-120)		
MSD_200910010237	EDTA	ND	0.5	0.460	mg/L	92	(80-120)	20	0.87
LCS1	NTA		0.2	0.219	mg/L	109	(80-120)		
LCS2	NTA		0.2	0.207	mg/L	103	(80-120)	20	5.6
MBLK	NTA			<0.1	mg/L				
MRL_CHK	NTA		0.1	0.121	mg/L	121	(50-150)		
MS_200910010237	NTA	ND	0.2	0.181	mg/L	91	(80-120)		
MSD_200910010237	NTA	ND	0.2	0.193	mg/L	96	(80-120)	20	6.3

QC Ref# 527627 - Perfluorinated compounds by MWH PFC **Analysis Date: 10/09/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluoro butanoic acid- PFBA		50	51.6	ng/L	103	(70-130)		
MBLK	Perfluoro butanoic acid- PFBA			<5	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		5.0	4.61	ng/L	92	(50-150)		
MS_200909290264	Perfluoro butanoic acid- PFBA		50	57.0	ng/l	114	(70-130)		
MSD_200909290264	Perfluoro butanoic acid- PFBA		50	47.3	ng/l	95	(70-130)	30	19
LCS1	Perfluoro octanesulfonate-PFOS		50	53.0	ng/L	106	(70-130)		
MBLK	Perfluoro octanesulfonate-PFOS			<5	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		5.0	4.98	ng/L	100	(50-150)		
MS_200909290264	Perfluoro octanesulfonate-PFOS	ND	50	48.9	ng/l	97	(70-130)		
MSD_200909290264	Perfluoro octanesulfonate-PFOS	ND	50	49.2	ng/l	98	(70-130)	30	0.62
LCS1	Perfluoro octanoic acid - PFOA		50	53.8	ng/L	108	(70-130)		
MBLK	Perfluoro octanoic acid - PFOA			<5	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	4.71	ng/L	94	(50-150)		
MS_200909290264	Perfluoro octanoic acid - PFOA	ND	50	49.2	ng/l	97	(70-130)		
MSD_200909290264	Perfluoro octanoic acid - PFOA	ND	50	48.4	ng/l	96	(70-130)	30	1.7
LCS1	PFBA-C13 (I)			95.9	%	96	(50-150)		
MBLK	PFBA-C13 (I)			96.0	%	96	(50-150)		
MRL_CHK	PFBA-C13 (I)			97.7	%	98	(50-150)		
MS_200909290264	PFBA-C13 (I)			96.3	%	96	(50-150)		
MSD_200909290264	PFBA-C13 (I)			99.4	%	99	(50-150)		
LCS1	PFOA-C13 (I)			108	%	108	(50-150)		
MBLK	PFOA-C13 (I)			110	%	110	(50-150)		
MRL_CHK	PFOA-C13 (I)			110	%	110	(50-150)		
MS_200909290264	PFOA-C13 (I)			107	%	107	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MSD_200909290264	PFOA-C13 (I)			108	%	108	(50-150)		
LCS1	PFOS-C13 (I)			100	%	100	(50-150)		
MBLK	PFOS-C13 (I)			96.0	%	96	(50-150)		
MRL_CHK	PFOS-C13 (I)			98.0	%	98	(50-150)		
MS_200909290264	PFOS-C13 (I)			94.8	%	95	(50-150)		
MSD_200909290264	PFOS-C13 (I)			98.6	%	99	(50-150)		

QC Ref# 527956 - Perfluorinated compounds by MWH PFC **Analysis Date: 10/16/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluoro butanoic acid- PFBA		50	58.9	ng/L	118	(70-130)		
LCS2	Perfluoro butanoic acid- PFBA		50	50.2	ng/L	100	(70-130)	20	16
MBLK	Perfluoro butanoic acid- PFBA			<5	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		20	22.5	ng/L	113	(50-150)		
MS_200910130197	Perfluoro butanoic acid- PFBA	ND	50	42.6	ng/l	85	(70-130)		
MSD_200910130197	Perfluoro butanoic acid- PFBA	ND	50	41.9	ng/l	84	(70-130)	30	1.7
LCS1	Perfluoro octanesulfonate-PFOS		50	49.5	ng/L	99	(70-130)		
LCS2	Perfluoro octanesulfonate-PFOS		50	50.6	ng/L	101	(70-130)	20	2.2
MBLK	Perfluoro octanesulfonate-PFOS			<5	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		5.0	5.1	ng/L	102	(50-150)		
MS_200910130197	Perfluoro octanesulfonate-PFOS	ND	50	51.1	ng/l	101	(70-130)		
MSD_200910130197	Perfluoro octanesulfonate-PFOS	ND	50	50.9	ng/l	100	(70-130)	30	1
LCS1	Perfluoro octanoic acid - PFOA		50	54.2	ng/L	108	(70-130)		
LCS2	Perfluoro octanoic acid - PFOA		50	56.6	ng/L	113	(70-130)	20	4.3
MBLK	Perfluoro octanoic acid - PFOA			<5	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	5.85	ng/L	117	(50-150)		
MS_200910130197	Perfluoro octanoic acid - PFOA	ND	50	54.2	ng/l	102	(70-130)		
MSD_200910130197	Perfluoro octanoic acid - PFOA	ND	50	55.2	ng/l	104	(70-130)	30	1.9
LCS1	PFBA-C13 (I)			103	%	103	(50-150)		
LCS2	PFBA-C13 (I)			99.8	%	100	(50-150)		
MBLK	PFBA-C13 (I)			102	%	102	(50-150)		
MRL_CHK	PFBA-C13 (I)			103	%	103	(50-150)		
MS_200910130197	PFBA-C13 (I)			105	%	105	(50-150)		
MSD_200910130197	PFBA-C13 (I)			107	%	107	(50-150)		
LCS1	PFOA-C13 (I)			97.2	%	97	(50-150)		
LCS2	PFOA-C13 (I)			96.6	%	97	(50-150)		
MBLK	PFOA-C13 (I)			97.9	%	98	(50-150)		
MRL_CHK	PFOA-C13 (I)			100	%	100	(50-150)		
MS_200910130197	PFOA-C13 (I)			96.8	%	97	(50-150)		
MSD_200910130197	PFOA-C13 (I)			96.3	%	96	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	PFOS-C13 (I)			98.6	%	99	(50-150)		
LCS2	PFOS-C13 (I)			105	%	105	(50-150)		
MBLK	PFOS-C13 (I)			103	%	103	(50-150)		
MRL_CHK	PFOS-C13 (I)			101	%	101	(50-150)		
MS_200910130197	PFOS-C13 (I)			83.5	%	84	(50-150)		
MSD_200910130197	PFOS-C13 (I)			85.3	%	85	(50-150)		

QC Ref# 527973 - Perfluorinated compounds by MWH PFC — Analysis Date: 10/15/2009

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluoro butanoic acid- PFBA		50	59.3	ng/L	119	(70-130)		
LCS2	Perfluoro butanoic acid- PFBA		50	63.8	ng/L	128	(70-130)	20	7.3
MBLK	Perfluoro butanoic acid- PFBA			<5	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		20	21.5	ng/L	108	(50-150)		
MS_200910130172	Perfluoro butanoic acid- PFBA		50	42.9	ng/l	86	(70-130)		
MSD_200910130172	Perfluoro butanoic acid- PFBA		50	48.3	ng/l	97	(70-130)	30	12
LCS1	Perfluoro octanesulfonate-PFOS		50	50.8	ng/L	102	(70-130)		
LCS2	Perfluoro octanesulfonate-PFOS		50	50.4	ng/L	101	(70-130)	20	0.79
MBLK	Perfluoro octanesulfonate-PFOS			<5	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		5.0	3.96	ng/L	79	(50-150)		
MS_200910130172	Perfluoro octanesulfonate-PFOS	ND	50	49.4	ng/l	97	(70-130)		
MSD_200910130172	Perfluoro octanesulfonate-PFOS	ND	50	54.3	ng/l	107	(70-130)	30	9.4
LCS1	Perfluoro octanoic acid - PFOA		50	52.4	ng/L	105	(70-130)		
LCS2	Perfluoro octanoic acid - PFOA		50	51.0	ng/L	102	(70-130)	20	2.7
MBLK	Perfluoro octanoic acid - PFOA			<5	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	3.76	ng/L	75	(50-150)		
MS_200910130172	Perfluoro octanoic acid - PFOA	ND	50	50.9	ng/l	102	(70-130)		
MSD_200910130172	Perfluoro octanoic acid - PFOA	ND	50	54.2	ng/l	108	(70-130)	30	5.7
LCS1	PFBA-C13 (I)			96.1	%	96	(50-150)		
LCS2	PFBA-C13 (I)			97.2	%	97	(50-150)		
MBLK	PFBA-C13 (I)			98.6	%	99	(50-150)		
MRL_CHK	PFBA-C13 (I)			96.0	%	96	(50-150)		
MS_200910130172	PFBA-C13 (I)			101	%	101	(50-150)		
MSD_200910130172	PFBA-C13 (I)			98.8	%	99	(50-150)		
LCS1	PFOA-C13 (I)			96.8	%	97	(50-150)		
LCS2	PFOA-C13 (I)			95.5	%	96	(50-150)		
MBLK	PFOA-C13 (I)			98.8	%	99	(50-150)		
MRL_CHK	PFOA-C13 (I)			95.8	%	96	(50-150)		
MS_200910130172	PFOA-C13 (I)			94.9	%	95	(50-150)		
MSD_200910130172	PFOA-C13 (I)			93.2	%	93	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	PFOS-C13 (I)			104	%	104	(50-150)		
LCS2	PFOS-C13 (I)			102	%	102	(50-150)		
MBLK	PFOS-C13 (I)			95.5	%	96	(50-150)		
MRL_CHK	PFOS-C13 (I)			100	%	100	(50-150)		
MS_200910130172	PFOS-C13 (I)			89.4	%	89	(50-150)		
MSD_200910130172	PFOS-C13 (I)			88.3	%	88	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

9/30/2009

Henry Barrientos
Groundwater Management Unit
Water Supply Management Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Henry Barrientos,

This transmits the analytical results for the Laboratory services that you requested. The data contained herein are supported by the Laboratory Services Unit's Quality Assurance/Quality Control Program.

The analytical results, quality control information, and sample handling observations have been reviewed for both completeness and accuracy, with any exceptions noted.

Laboratory Analyst(s)

James N. Scott
Laboratory Manager

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

Lab No. 200909280897

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E08D012 (MW-1)**	**Unknown**	**91041015-0000**	**9/28/2009**	**0:00**	**Thomas M.**

Batch: 58195

Prep Date:	Analysis Date: 9/28/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.20	mg/L		

Lab No. 200909280898

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E08D011 (MW-2)**	**Unknown**	**91041015-0000**	**9/28/2009**	**0:00**	**Thomas M.**

Batch: 58195

Prep Date:	Analysis Date: 9/28/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.12	mg/L		

Lab No. 200909280899

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E07A014 (MW-3)**	**Unknown**	**91041015-0000**	**9/28/2009**	**0:00**	**Thomas M.**

Batch: 58195

Prep Date:	Analysis Date: 9/28/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.19	mg/L		

Lab No. 200909280900

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**08S02E07A015 (MW-4)**	**Unknown**	**91041015-0000**	**9/28/2009**	**0:00**	**Thomas M.**

Batch: 58195

Prep Date:	Analysis Date: 9/28/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.18	mg/L		

Lab No. 200909280901

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**SOURCE**	**Unknown**	**91041015-0000**	**9/28/2009**	**0:00**	**Thomas M.**

Batch: 58195

Prep Date:	Analysis Date: 9/29/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.25	mg/L		

Legend:

DLR = Detection Limit For Reporting
ND = Not Detected At Or Above The DLR
NT = Not Tested
NR = Not Reported

ABS = Centimeters $^{-1}$
Cells/ml = Cells Per Milliliter
CFU/100 ml = Colony Forming Units Per 100 Milliliters
CFU/ml = Colony Forming Units Per Milliliter
cysts/L = Cysts Per Liter
Deg. C = Degrees Centigrade
mg/L = Milligrams Per Liter
MPN/100ml = Most Probable Number Per 100 Milliliters
ng/L = Nanograms Per Liter

NTU = Nephelometric Turbidity Units
oocysts/L = Oocysts Per Liter
P/A 100ml = Presence/Absence Per 100 Milliliters
pCi/L = Picocuries Per Liter
Rhod-Eqiv = Rhodamine Equivalents
T.O.N. = Threshold Odor Number
ug C/L = Micrograms Carbon Per Liter
ug/L = Micrograms Per Liter
umhos= Microhms

Data Qualifier Definitions:

Laboratory Services Unit
1026 Blossom Hill Road
San Jose, CA 95123

Santa Clara Valley Water District

Batch: 58195

QC Code	Test Name		Reported Value	Units	Flag		Acceptance Range	RPD	Flag	RPD Limit
LFB	Bromide	Spike Amount: 1	0.98	mg/L		%Rec: 97.7	90 - 110			
LFM	Bromide	Spike Amount: 1	1.02	mg/L		%Rec: 99.8	90 - 110			
LFM	Bromide	Spike Amount: 1	1.22	mg/L		%Rec: 96.9	90 - 110			
LFM D	Bromide	Spike Amount: 1	1.02	mg/L		%Rec: 99.4	90 - 110	0.3		15
LFM D	Bromide	Spike Amount: 1	1.22	mg/L		%Rec: 96.6	90 - 110	0.3		15
QCS R	Bromide	1	0.96	mg/L		%Rec: 96	90 - 110			
LFB	Fluoride	Spike Amount: 1	1.05	mg/L		%Rec: 104.9	90 - 110			
LFM	Fluoride	Spike Amount: 1	1.06	mg/L		%Rec: 92.3	90 - 110			
LFM D	Fluoride	Spike Amount: 1	1.06	mg/L		%Rec: 92.2	90 - 110	0.1		15
QCS R	Fluoride	1	0.99	mg/L		%Rec: 99.5	90 - 110			
LFB	Nitrate	Spike Amount: 2	1.9	mg/L		%Rec: 94	90 - 110			
LFM	Nitrate	Spike Amount: 1	0.9	mg/L		%Rec: 93.7	90 - 110			
LFM D	Nitrate	Spike Amount: 1	0.9	mg/L		%Rec: 93.9	90 - 110	0.3		15
QCS R	Nitrate	1	0.9	mg/L		%Rec: 90	90 - 110			
LFB	Phosphate	Spike Amount: 2	1.88	mg/L		%Rec: 93.8	90 - 110			
LFM	Phosphate	Spike Amount: 1	1.62	mg/L		%Rec: 90.8	90 - 110			
LFM D	Phosphate	Spike Amount: 1	1.62	mg/L		%Rec: 90.3	90 - 110	0.3		15
QCS R	Phosphate	1	0.95	mg/L		%Rec: 94.6	90 - 110			
LFB	Sulfate	Spike Amount: 40	40.4	mg/L		%Rec: 101	90 - 110			
LFM	Sulfate	Spike Amount: 20	47.1	mg/L		%Rec: 95.6	90 - 110			
LFM D	Sulfate	Spike Amount: 20	47.1	mg/L		%Rec: 95.5	90 - 110	0		15
QCS R	Sulfate	40	40.3	mg/L		%Rec: 100.8	90 - 110			

Report Notes:

QCS, spike recovery, and RPD values that are outside of established limits are underlined.

If an LFM recovery exceeds the established limits for any analyte, and the laboratory performance for other QC parameters is shown to be in control for that analyte, then failure is not system related but due to matrix interferences and is labeled as suspect.

Reported values that are flagged "H" are above the established acceptance range; reported values that are flagged "L" are below the acceptance range. RPD results flagged "H" are above the established RPD limit.-

Quality control sample (LFB, LFM, LFM D, QCS, QCS R, and Surrogate) reporting frequency is based on the method requirement (e.g., a QCS may not be run with every batch).

Legend:

LFB = Laboratory Fortified Blank: An aliquot of a Laboratroty Reagent Blank (LRB) to which known quantities of the method analytes are added in the laboratory. The LFB is analyzed exactly like a sample.

LFB D = Laboratory Fortified Blank Duplicate: A duplicate aliquot of an LRB to which known quantities of the method analytes are added in the laboratory. The LFB D is analyzed exactly like a sample.

LFM = Laboratory Fortified Matrix: An aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM is analyze exactly like a sample.

LFM D = Laboratory Fortified Matrix Duplicate: A duplicate aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM D is analyzed exactly like a sample.

QCS = Quality Control Sample: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified concentration range.

QCS R = Quality Control Sample Recovery: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS R is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified recovery range.

RPD = Relative Percent Difference

SUR = Surrogate. An organic compound that is similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis.

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 592608

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 10-22-2009
MPN-Standard Bacteria: 10-26-2009

Project SOPs: MPN-Standard Bacteria (100130)

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 10-19-2009
Date of Receipt: 10-19-2009
Date of Report: 10-26-2009

MPN REPORT

Location: L5 Comp
Lab ID-Version‡: 2627295-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	10/19/09 13:00	2	0.01	14
Total Coliform	SM 9221 B	10/19/09 13:00	240	80	720
E. coli	SM 9221 F	10/19/09 13:00	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.

**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" greater than 1 indicates amended data.

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 592608

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 10-22-2009

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Sampling: 10-19-2009
Date of Receipt: 10-19-2009
Date of Report: 10-22-2009

HETEROTROPHIC PLATE COUNT REPORT

Location:	L5 Comp
Comments (see below)	None
Lab ID-Version‡:	2627296-1
Sample Type	Water sample
Method	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10
Setup Time	10/19/2009 at 03:00 PM
Incubation Info	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml
CFU/Reporting Unit	3,900 (est.*)
Read Time	10/21/2009 at 03:00 PM

Comments:

* Estimated result

‡ A "Version" greater than 1 indicates amended data.

MWH
LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
10/29/2009
Yolanda Martin
MWH LABORATORIES

YOM: Yolanda.O.Martin

Project Manager

01114CA

Report#: 317357
Project:
RECYCLED-WATER-STUDY
Group: Chemistry
PO#: B30-12470

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH Laboratories
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 317357
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Yolanda.O.Martin
Phone: 626-386-1104
PO #: B30-12470

The following samples were received from you on **October 20, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Sample Date
200910200331	L-5 Composite	19-Oct-2009 00:00
	@NDMA_SPE @PFC	

Test Description

@NDMA_SPE -- Nitrosamines by GCMS

@PFC -- Perfluorinated compounds

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

3°

ENTERED
317357
Jane Herrig

SERIAL NO. 14538

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-7000
RECORDER Murphy (SIGN)

SAMPLERS MURPHY (PRINT)
Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- A. 40-ml VOA Vial
- [✓ B.] Glass Liter
- C. Plastic 500-ml
- D. Plastic Liter
- E. Brass Tube
- [✓ F.] Other 125 poly

SAMPLE DESCRIPTION CODES
- [✓ A.] Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- H. Blank/Spike
- I. Other ______

TAT CODES
- [✓ 1.] Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB MWH

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HNO$_3$	HCL	Thio	Field Filtered (check)	ANALYSIS REQUESTED: NDMA	PFC								TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	10/19/09	COMP	LS COMP	—	—	—	B	A				1		X									1		✓				
2		COMP	LS COMP	—	—	—	F	A	1						X								1		✓				
3																											Bottles are half filled		
4																													
5																													
6																													
7																													
8																													
9																													
10	3/10																												
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Murphy	Jane Herrig	10/20/09	12:05
Jane Herrig 10/20/09 15:05			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
COURIER	COOLER	NO	Thomas Murphy	10/20/09	1205		10-21	8:42

Send Lab Results to (Name): NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

MWH LABORATORIES

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750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 317357

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
10/20/2009

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL

SUMMARY OF POSITIVE DATA ONLY

MWH LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 317357

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
10/20/2009

L-5 Composite (200910200331) **Sampled on 10/19/2009 00:00**

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
		EPA 521 - Nitrosamines by GCMS						
10/22/2009	10/24/2009 11:54	528889	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/L	2	1
10/22/2009	10/24/2009 11:54	528889	(EPA 521)	NDMA-D6	74	%		1
		MWH PFC - Perfluorinated compounds						
	10/27/2009 18:50	529247	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	10/27/2009 18:50	529247	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	10/27/2009 18:50	529247	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	10/27/2009 18:50	529247	(MWH PFC)	PFBA-C13	106	%		1
	10/27/2009 18:50	529247	(MWH PFC)	PFOA-C13	100	%		1
	10/27/2009 18:50	529247	(MWH PFC)	PFOS-C13	59	%		1

Rounding on totals after summation.
(c) - indicates calculated results

MWH
LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Comments
Report: #317357

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

The Comments Report may be blank if there are no comments for this report.

QC Ref # 528889 - Nitrosamines by GCMS		**Analysis Date: 10/24/2009**	
200910200331	L-5 Composite		Analyzed by: KAM
QC Ref # 529247 - Perfluorinated compounds		**Analysis Date: 10/27/2009**	
200910200331	L-5 Composite		Analyzed by: LHZ

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 528889 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 10/23/2009**			
CCCH	N-Nitroso dimethylamine (NDMA)		100	97.6	ng/l	98	(70-130)		
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	2.27	ng/l	113	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	42.4	ng/l	106	(70-130)		
LCS1	N-Nitroso dimethylamine (NDMA)		40	37.1	ng/L	93	(70-130)		
LCSD	N-Nitroso dimethylamine (NDMA)			35.9	ng/l				
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MS1_200910200334	N-Nitroso dimethylamine (NDMA)	ND	2.0	2.58	ng/L	129	(50-150)		
MSD1_200910200334	N-Nitroso dimethylamine (NDMA)	ND	2.0	2.42	ng/L	121	(50-150)	30	6.4
CCCH	N-Nitrosodi-n-propylamin(NDPA)		100	106	ng/l	106	(70-130)		
CCCL	N-Nitrosodi-n-propylamin(NDPA)		2.0	2.34	ng/l	117	(50-150)		
CCCM	N-Nitrosodi-n-propylamin(NDPA)		40	42.4	ng/l	106	(70-130)		
LCS1	N-Nitrosodi-n-propylamin(NDPA)		40	33.2	ng/L	83	(70-130)		
LCSD	N-Nitrosodi-n-propylamin(NDPA)			28.1	ng/l				
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/L				
MS1_200910200334	N-Nitrosodi-n-propylamin(NDPA)	ND	2.0	1.25	ng/L	63	(50-150)		
MSD1_200910200334	N-Nitrosodi-n-propylamin(NDPA)	ND	2.0	1.23	ng/L	61	(50-150)	30	2.1
CCCH	N-Nitrosodibutylamine (NDBA)		100	109	ng/l	109	(70-130)		
CCCL	N-Nitrosodibutylamine (NDBA)		2.0	2.38	ng/l	119	(50-150)		
CCCM	N-Nitrosodibutylamine (NDBA)		40	46.6	ng/l	117	(70-130)		
LCS1	N-Nitrosodibutylamine (NDBA)		40	42.4	ng/L	106	(70-130)		
LCSD	N-Nitrosodibutylamine (NDBA)			38.4	ng/l				
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/L				
MS1_200910200334	N-Nitrosodibutylamine (NDBA)	ND	2.0	2.85	ng/L	142	(50-150)		
MSD1_200910200334	N-Nitrosodibutylamine (NDBA)	ND	2.0	2.58	ng/L	129	(50-150)	30	9.6
CCCH	N-Nitrosodiethylamine (NDEA)		100	101	ng/l	101	(70-130)		
CCCL	N-Nitrosodiethylamine (NDEA)		2.0	1.96	ng/l	98	(50-150)		
CCCM	N-Nitrosodiethylamine (NDEA)		40	41.4	ng/l	104	(70-130)		
LCS1	N-Nitrosodiethylamine (NDEA)		40	33.8	ng/L	85	(70-130)		
LCSD	N-Nitrosodiethylamine (NDEA)			35.0	ng/l				
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/L				
MS1_200910200334	N-Nitrosodiethylamine (NDEA)	ND	2.0	2.6	ng/L	130	(50-150)		
MSD1_200910200334	N-Nitrosodiethylamine (NDEA)	ND	2.0	2.65	ng/L	132	(50-150)	30	1.5
CCCH	N-Nitrosomethylethylamin(NMEA)		100	104	ng/l	104	(70-130)		
CCCL	N-Nitrosomethylethylamin(NMEA)		2.0	2.17	ng/l	108	(50-150)		
CCCM	N-Nitrosomethylethylamin(NMEA)		40	41.1	ng/l	103	(70-130)		
LCS1	N-Nitrosomethylethylamin(NMEA)		40	32.9	ng/L	82	(70-130)		
LCSD	N-Nitrosomethylethylamin(NMEA)			34.1	ng/l				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/L				
MS1_200910200334	N-Nitrosomethylethylamin(NMEA)	ND	2.0	2.12	ng/L	106	(50-150)		
MSD1_200910200334	N-Nitrosomethylethylamin(NMEA)	ND	2.0	2.08	ng/L	104	(50-150)	30	1.9
CCCH	N-Nitrosopyrollidine (NPYR)		100	109	ng/l	109	(70-130)		
CCCL	N-Nitrosopyrollidine (NPYR)		2.0	2.35	ng/l	118	(50-150)		
CCCM	N-Nitrosopyrollidine (NPYR)		40	45.0	ng/l	112	(70-130)		
LCS1	N-Nitrosopyrollidine (NPYR)		40	39.8	ng/L	100	(70-130)		
LCSD	N-Nitrosopyrollidine (NPYR)			36.0	ng/l				
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/L				
MS1_200910200334	N-Nitrosopyrollidine (NPYR)	ND	2.0	2.25	ng/L	112	(50-150)		
MSD1_200910200334	N-Nitrosopyrollidine (NPYR)	ND	2.0	2.09	ng/L	105	(50-150)	30	6.5
CCCH	NDMA-D6 (S)			102	%	102	(70-130)		
CCCL	NDMA-D6 (S)			107	%	107	(70-130)		
CCCM	NDMA-D6 (S)			112	%	112	(70-130)		
LCS1	NDMA-D6 (S)			73.6	%	74	(70-130)		
LCSD	NDMA-D6 (S)			75.1	%	75	(50-150)		
MBLK	NDMA-D6 (S)			78.6	%	79	(70-130)		
MS1_200910200334	NDMA-D6 (S)			77.7	%	78	(70-130)		
MSD1_200910200334	NDMA-D6 (S)			75.0	%	75	(70-130)		

QC Ref# 528954 - Nitrosamines by GCMS by EPA 521 **Analysis Date: 10/26/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	1.51	ng/L	76	(50-150)		
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2.0	1.27	ng/L	64	(50-150)		
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2.0	2.51	ng/L	125	(50-150)		
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2.0	1.87	ng/L	94	(50-150)		
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2.0	2.02	ng/L	101	(50-150)		
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2.0	2.02	ng/L	101	(50-150)		
MRL_CHK	NDMA-D6 (S)			74.8	%	75	(70-130)		

QC Ref# 529247 - Perfluorinated compounds by MWH PFC **Analysis Date: 10/27/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluoro butanoic acid- PFBA		50	38.3	ng/L	77	(70-130)		
LCS2	Perfluoro butanoic acid- PFBA		50	39.2	ng/L	78	(70-130)	20	2.3
MBLK	Perfluoro butanoic acid- PFBA			<5	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		20	19.5	ng/L	98	(50-150)		
MS_200910190149	Perfluoro butanoic acid- PFBA		50	41.1	ng/l	82	(70-130)		
MSD_200910190149	Perfluoro butanoic acid- PFBA		50	40.9	ng/l	82	(70-130)	30	0.49
LCS1	Perfluoro octanesulfonate-PFOS		50	56.5	ng/L	113	(70-130)		
LCS2	Perfluoro octanesulfonate-PFOS		50	53.6	ng/L	107	(70-130)	20	5.3

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Perfluoro octanesulfonate-PFOS			<5	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		5.0	5.15	ng/L	103	(50-150)		
MS_200910190149	Perfluoro octanesulfonate-PFOS	ND	50	54.7	ng/l	109	(70-130)		
MSD_200910190149	Perfluoro octanesulfonate-PFOS	ND	50	49.1	ng/l	98	(70-130)	30	11
LCS1	Perfluoro octanoic acid - PFOA		50	47.0	ng/L	94	(70-130)		
LCS2	Perfluoro octanoic acid - PFOA		50	45.2	ng/L	90	(70-130)	20	3.9
MBLK	Perfluoro octanoic acid - PFOA			<5	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	2.97	ng/L	59	(50-150)		
MS_200910190149	Perfluoro octanoic acid - PFOA	ND	50	46.9	ng/l	93	(70-130)		
MSD_200910190149	Perfluoro octanoic acid - PFOA	ND	50	48.6	ng/l	96	(70-130)	30	3.6
LCS1	PFBA-C13 (I)			101	%	101	(50-150)		
LCS2	PFBA-C13 (I)			106	%	106	(50-150)		
MBLK	PFBA-C13 (I)			105	%	105	(50-150)		
MRL_CHK	PFBA-C13 (I)			112	%	112	(50-150)		
MS_200910190149	PFBA-C13 (I)			106	%	106	(50-150)		
MSD_200910190149	PFBA-C13 (I)			103	%	103	(50-150)		
LCS1	PFOA-C13 (I)			97.2	%	97	(50-150)		
LCS2	PFOA-C13 (I)			100	%	100	(50-150)		
MBLK	PFOA-C13 (I)			98.4	%	98	(50-150)		
MRL_CHK	PFOA-C13 (I)			97.3	%	97	(50-150)		
MS_200910190149	PFOA-C13 (I)			100	%	100	(50-150)		
MSD_200910190149	PFOA-C13 (I)			95.4	%	95	(50-150)		
LCS1	PFOS-C13 (I)			99.2	%	99	(50-150)		
LCS2	PFOS-C13 (I)			98.8	%	99	(50-150)		
MBLK	PFOS-C13 (I)			102	%	102	(50-150)		
MRL_CHK	PFOS-C13 (I)			105	%	105	(50-150)		
MS_200910190149	PFOS-C13 (I)			97.4	%	97	(50-150)		
MSD_200910190149	PFOS-C13 (I)			100	%	100	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

LABORATORY SERVICES
1026 Blossom Hill Road
San Jose, CA 95123-1193
Santa Clara Valley Water District

Certificate of Analysis

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

10/26/2009

Henry Barrientos
Groundwater Management Unit
Water Supply Management Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Henry Barrientos,

This transmits the analytical results for the Laboratory services that you requested. The data contained herein are supported by the Laboratory Services Unit's Quality Assurance/Quality Control Program.

The analytical results, quality control information, and sample handling observations have been reviewed for both completeness and accuracy, with any exceptions noted.

Laboratory Analyst(s)

James N. Scott
Laboratory Manager

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD

(See Reverse for Instructions)

SERIAL N
1453

PROJECT NAME Recycled Water Study

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLERS MURPHY (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F.] Other 250 poly

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO.

SCVWD
lab #
0603 TM

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO3	HCL		Field Filtered (check)	ANALYSIS REQUESTED BROMIDE									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
~~1~~	~~10/19/09~~	~~COMP~~	~~L5 COMP~~	~~—~~	~~—~~	~~—~~	~~F~~	~~A~~	~~1~~					~~X~~			TM						1		✓				
2	10/19/09	COMP	L10 COMP	—	—	—	F	A	1					X									1		✓				
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

7.0°C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date 10/19/09	Time 10 25
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	cooler	NO	Thomas Murphy	10/19/09	1030			

Send Lab Results to (Name): NORMAN WONG (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

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Certificate of Analysis - Analytical Report

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

Lab No. 200910190603

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**L10 COMP**	**Unknown**	**91041015-0000**	**10/19/2009**	**10:30**	**Thomas M.**

Batch: 58477

Prep Date:	Analysis Date:	Method:	Section:	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
	10/19/2009	EPA 300.0	INORGANIC	Bromide	0.25	mg/L		

Legend:

DLR = Detection Limit For Reporting
ND = Not Detected At Or Above The DLR
NT = Not Tested
NR = Not Reported

ABS = Centimeters $^{-1}$
Cells/ml = Cells Per Milliliter
CFU/100 ml = Colony Forming Units Per 100 Milliliters
CFU/ml = Colony Forming Units Per Milliliter
cysts/L = Cysts Per Liter
Deg. C = Degrees Centigrade
mg/L = Milligrams Per Liter
MPN/100ml = Most Probable Number Per 100 Milliliters
ng/L = Nanograms Per Liter

NTU = Nephelometric Turbidity Units
oocysts/L = Oocysts Per Liter
P/A 100ml = Presence/Absence Per 100 Milliliters
pCi/L = Picocuries Per Liter
Rhod-Eqiv = Rhodamine Equivalents
T.O.N. = Threshold Odor Number
ug C/L = Micrograms Carbon Per Liter
ug/L = Micrograms Per Liter
umhos= Microhms

Data Qualifier Definitions:

Certificate of Analysis - QC Report

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

Batch: 58477

QC Code	Test Name		Reported Value	Units	Flag		Acceptance Range	RPD	Flag	RPD Limit
LFB	Bromide	Spike Amount: 1	1.00	mg/L		%Rec: 100.1	90 - 110			
QCS R	Bromide	1	0.97	mg/L		%Rec: 97.4	90 - 110			
LFB	Phosphate	Spike Amount: 2	1.98	mg/L		%Rec: 99.2	90 - 110			
LFM	Phosphate	Spike Amount: 1	1.69	mg/L		%Rec: 90	90 - 110			
LFM	Phosphate	Spike Amount: 1	1.68	mg/L		%Rec: 91.1	90 - 110			
LFM D	Phosphate	Spike Amount: 1	1.69	mg/L		%Rec: 90	90 - 110	0		15
LFM D	Phosphate	Spike Amount: 1	1.67	mg/L		%Rec: 90.8	90 - 110	0.2		15
QCS R	Phosphate	3	3.05	mg/L		%Rec: 101.5	90 - 110			

Report Notes:

QCS, spike recovery, and RPD values that are outside of established limits are underlined.

If an LFM recovery exceeds the established limits for any analyte, and the laboratory performance for other QC parameters is shown to be in control for that analyte, then failure is not system related but due to matrix interferences and is labeled as suspect.

Reported values that are flagged "H" are above the established acceptance range; reported values that are flagged "L" are below the acceptance range. RPD results flagged "H" are above the established RPD limit.-

Quality control sample (LFB, LFM, LFM D, QCS, QCS R, and Surrogate) reporting frequency is based on the method requirement (e.g., a QCS may not be run with every batch).

Legend:

LFB = Laboratory Fortified Blank: An aliquot of a Laboratroty Reagent Blank (LRB) to which known quantities of the method analytes are added in the laboratory. The LFB is analyzed exactly like a sample.

LFB D = Laboratory Fortified Blank Duplicate: A duplicate aliquot of an LRB to which known quantities of the method analytes are added in the laboratory. The LFB D is analyzed exactly like a sample.

LFM = Laboratory Fortified Matrix: An aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM is analyzed exactly like a sample.

LFM D = Laboratory Fortified Matrix Duplicate: A duplicate aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM D is analyzed exactly like a sample.

QCS = Quality Control Sample: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified concentration range.

QCS R = Quality Control Sample Recovery: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS F is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified recovery range.

RPD = Relative Percent Difference

SUR = Surrogate. An organic compound that is similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis.

Sample Event 7
12/14/2009

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 217244
ANALYTICAL REPORT

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

Project : 27011-07-4200
Location : Recycled Water Study
Level : II

Sample ID	Lab ID
MW-1	217244-001
MW-2	217244-002
MW-3	217244-003
MW-4	217244-004
L-5 COMP	217244-005
L-10 COMP	217244-006
SOURCE	217244-007

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: ______________________
Project Manager

Date: 01/08/2010

NELAP # 01107CA

CASE NARRATIVE

Laboratory number:	**217244**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**12/14/09**
Samples Received:	**12/14/09**

This data package contains sample and QC results for seven water samples, requested for the above referenced project on 12/14/09. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

Metals (EPA 6010B):
No analytical problems were encountered.

Ion Chromatography (EPA 300.0):
No analytical problems were encountered.

Total Cyanide (SM4500CN-E):
No analytical problems were encountered.

Alkalinity (SM2320B):
No analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):
No analytical problems were encountered.

Total Phosphorous (SM4500P-E):
High recovery was observed for phosphorous in the MS for batch 158420; the parent sample was not a project sample, and the LCS was within limits. High RPD was also observed for phosphorous in the MS/MSD for batch 158420. No other analytical problems were encountered.

Total Organic Carbon (TOC) (SM5310C):
No analytical problems were encountered.

Dissolved Organic Carbon (DOC) (SM5310C):
No analytical problems were encountered.

Surfactants (MBAS) (SM5540C):
High recovery was observed for surfactants (MBAS) in the MS of SOURCE (lab # 217244-007); the LCS was within limits, the associated RPD was within limits, and this analyte was not detected at or above the RL in the associated sample. No other analytical problems were encountered.

CASE NARRATIVE

Laboratory number:	**217244**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**12/14/09**
Samples Received:	**12/14/09**

EPA 552 (EPA 552):

Columbia Analytical Services in Kelso, WA performed the analysis. Please see the Columbia Analytical Services case narrative.

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14579

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER 9 Hy Cast (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 poly
[✓ F.] Other 250 ml Amber glass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 217244

					AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED													LABORATORY USE ONLY		
	NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4/H_3PO_4	Field Filtered (check)	See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6 Full List	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1	12-14-09	0920	MW-1	15.9	830	661	D	A	1					X									1		✓				
	2							C	A		1					X								1		✓				
	3							F	A								X							1		✓				
	4							E	A	1								X						1		✓				
	5							A	A			3							X					1		✓	✓			
	6							B	A	1										X				1		✓				
	7							E	A				1								X			1		✓				
2	8		1045	MW-2	16.4	717	6.90	D	A	1					X									1		✓				
	9							C	A		1					X								1		✓				
	10							F	A				1				X							1		✓				
	11							E	A	1								X						1		✓				
	12							A	A			3							X					1		✓	✓			
	13							B	A	1										X				1		✓				
	14							E	A				1								X			1		✓				
	15																													
	16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride.
2. Boron, Calcium, Magnesium, Sodium, Potasium.

Field / Container Temp. [illegible]

1.5°C
12/14/09
2050 MV

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
9 Hy Cast			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14580, 81, 82, 84		12/14/09	1500		12/14/09	1500

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below)

Verbals Requested: Yes ☒ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14580

PROJECT NAME Recycled Water Study
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES	SAMPLE DESCRIPTION CODES	TAT CODES
[✓ A.] 40-ml VOA Vial [✓ B.] Glass Liter [✓ C.] Plastic 500-ml [✓ D.] Plastic Liter [✓ E.] ~~Brass Tube~~ 250 ml poly [✓ F.] Other 250 ml Amber glass	[✓ A.] Ground Water B. Surface Water C. Leachate D. Rinseate E. Soil/Sediment F. Oil G. Waste H. Blank/Spike I. Other ____	[✓ 1.] Standard 2. 48 Hour 3. 24 Hour 4. Other ____

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 217244

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL	H2SO4/H3PO4	Field Filtered (check)	ANALYSIS REQUESTED See Note 1	See Note 2	TOC, DOC	TDS	8010/8020	HAA6 Full List	Total Phosphate				TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
3	1	12-14-09	1250	MW-3	15.8	948	6.63	D	A	1					X										1		✓				
	2	↓	↓	↓	↓	↓	↓	C	A		1					X									1		✓				
	3	↓	↓	↓	↓	↓	↓	F	A				1				X								1		✓				
	4	↓	↓	↓	↓	↓	↓	E	A	1								X							1		✓				
	5	↓	↓	↓	↓	↓	↓	A	A			3							X						1		✓	✓			
	6	↓	↓	↓	↓	↓	↓	B	A	1										X					1		✓				
	7	↓	↓	↓	↓	↓	↓	E	A				1								X				1		✓				
4	8	↓	1145	MW-4	15.9	860	6.82	D	A	1					X										1		✓				
	9	↓	↓	↓	↓	↓	↓	C	A		1					X									1		✓				
	10	↓	↓	↓	↓	↓	↓	F	A				1				X								1		✓				
	11	↓	↓	↓	↓	↓	↓	E	A	1								X							1		✓				
	12	↓	↓	↓	↓	↓	↓	A	A			3							X						1		✓	✓			
	13	↓	↓	↓	↓	↓	↓	B	A	1										X					1		✓				
	14	↓	↓	↓	↓	↓	↓	E	A				1								X				1		✓				
	15																														
	16																														

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, Chloride
2. Boron, Calcium, Magnesium, Sodium, Potasium

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14579, 81, 82, 84		12/14/09	1500		12/14/09	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below)

Verbals Requested: Yes ☐ No ☐

☐ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

REV. 6/02

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14581

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
B. Glass Liter
[✓ C.] Plastic 500-ml
D. Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 Amber glass
[✓ F.] Other 250ml poly

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 217244

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4/H_3PO_4	Field Filtered (check)	See Note 1	See Note 2	TOC	DOC	TDS	8010/8020	HAA6 Full List	Total Phosphate	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
	1	12-14-09	comp	L-5 COMP	16.0	1788	7.23	C	A	1					X								1		✓				
5	2							F	A		1					X							1		✓				
	3							E	A				1				X						1		✓				
	4							E	A				1					X					1		✓				
	5							F	A	1									X				1		✓				
	6							A	A			2								X			1		✓	✓			
	7							E	A	1											X		1		✓				
6	8							F	A				1									X	1		✓				
	9			L-10 COMP	14.7	1634	7.23	C	A	1					X								1		✓				
	10							F	A		1					X							1		✓				
	11							E	A					1			X						1		✓				
	12							E	A					1				X					1		✓				
	13							F	A	1									X				1		✓				
	14							A	A			2								X			1		✓	✓			
	15							E	A	1											X		1		✓				
	16							F	A		1											X	1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride
2. Boron, Calcium, Magnesium, Sodium, Potasium,

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time	
Relinquished By: (Signature)	Received By: (Signature)	Date	Time	
Relinquished By: (Signature)	Received By: (Signature)	Date	Time	

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14579, 80, 8284		12/14/09	1500		12/14/09	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ OTHER TEL FAX

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14582

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
- [✓ A.] 40-ml VOA Vial
- [✓ B.] Glass Liter
- [✓ C.] Plastic 500-ml
- [✓ D.] Plastic Liter
- [✓ E.] ~~Brass Tube~~ 250 Poly
- [✓ F.] Other 250ml Amberglass

SAMPLE DESCRIPTION CODES
- [✓ A.] Ground Water
- B. Surface Water
- C. Leachate
- D. Rinseate
- E. Soil/Sediment
- F. Oil
- G. Waste
- [✓ H.] Blank/Spike
- I. Other ________

TAT CODES
- [✓ 1.] Standard
- 2. 48 Hour
- 3. 24 Hour
- 4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 217244

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4/H_3PO_4	~~Field Filtered (check)~~ NaOH	See Note 1	See Note 2	TOC DOC	TDS	8010/8020	HAA6 Full List	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
7 1	12-14-09	0930	Source	12.8	1179	7.41	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
4	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
5	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
6	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
7	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8	↓	↓	↓	↓	↓	↓	D	A	1												X		1		✓				
9	↓	↓	↓	↓	↓	↓	C	A					1									X	1		✓				
10	↓	—	Temp Blank	—	—	—	A	H	1															*	✓	NA	*		
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride
2. Boron, Calcium, Magnesium, Sodium, Potassium

Field / Container Temp.
* Temp to measured & rec. upon reciept of samples at lab
________ °C

Container Sealed with Custody Seal: Yes ☐ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	14579, 80, 81, 84		12/14/09	1500		12/14/09	1500

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ OTHER ________________________ TEL ________ FAX ________

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COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 217244 Date Received 12/14/09 Number of coolers 3

Client LOCUS Project RECYCLED WATER STUDY

Date Opened 12/14/09 By (print) M. VILLANUEVA (sign)

Date Logged in ✓ By (print) ✓ (sign) ✓

1. Did cooler come with a shipping slip (airbill, etc) YES [✓ NO]

   Shipping info

2A. Were custody seals present? ... ☒ YES (circle) [✓ on cooler] on samples ☐ NO

   How many 3 Name T. MURPHY Date 12/14/09

2B. Were custody seals intact upon arrival? [✓ YES] NO N/A

3. Were custody papers dry and intact when received? [✓ YES] NO

4. Were custody papers filled out properly (ink, signed, etc)? [✓ YES] NO

5. Is the project identifiable from custody papers? (If so fill out top of form) [✓ YES] NO

6. Indicate the packing in cooler: (if other, describe)

   ☒ Bubble Wrap
   ☐ Cloth material
   ☐ Foam blocks
   ☐ Cardboard
   ☒ Bags
   ☐ Styrofoam
   ☐ None
   ☐ Paper towels

7. Temperature documentation:

   Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 1.5

   ONLY 1 COOLER w/TEMP BLANK 12/14/09 2050 MV

   ☐ Samples Received on ice & cold without a temperature blank

   ☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES [✓ NO]

   If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? [✓ YES] NO

10. Are samples in the appropriate containers for indicated tests? [✓ YES] NO

11. Are sample labels present, in good condition and complete? [✓ YES] NO

12. Do the sample labels agree with custody papers? [✓ YES] NO

13. Was sufficient amount of sample sent for tests requested? [✓ YES] NO

14. Are the samples appropriately preserved? [✓ YES] NO N/A

15. Are bubbles > 6mm absent in VOA samples? [✓ YES] NO N/A

16. Was the client contacted concerning this sample delivery? YES NO

   If YES, Who was called? By Date:

COMMENTS

SAMPLE# 5 & 6 LIMITED SAMPLES

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1

Rev. 6 Number 1 of 3
Effective: 23 July 2008
Z:\qc\forms\checklists\Cooler Receipt Checklist_rv6.doc

Curtis & Tompkins Sample Preservation for 217244

Sample	pH: <2	>12	Other
-001a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☑	☐	
f	☑	☐	
g	☑	☐	
h	☐	☐	
i	☐	☐	
-002a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☑	☐	
f	☑	☐	
g	☑	☐	
h	☐	☐	
i	☐	☐	
-003a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☑	☐	
f	☑	☐	
g	☑	☐	
h	☐	☐	
i	☐	☐	
-004a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☑	☐	
f	☑	☐	
g	☑	☐	
h	☐	☐	
i	☐	☐	
-005a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☐	☐	
f	☑	☐	
g	☑	☐	
h	☑	☐	
i	☑	☐	
j	☐	☐	
-006a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☑	☐	
f	☑	☐	
g	☑	☐	
h	☑	☐	
i	☐	☐	
-007a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☑	☐	
f	☐	☑	
g	☑	☐	
h	☑	☐	
i	☐	☐	
j	☐	☐	
k	☐	☐	

Analyst: MJ
Date: 12/14/09
Page 1 of 1

Purgeable Halocarbons by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	158348
Lab ID:	217244-001	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	3.7	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	6.8	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	77	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	88	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	158348
Lab ID:	217244-001	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	77	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	88	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	158348
Lab ID:	217244-002	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	78	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	91	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	158348
Lab ID:	217244-002	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	78	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	91	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	158348
Lab ID:	217244-003	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	78	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	87	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	158348
Lab ID:	217244-003	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	78	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	87	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	158348
Lab ID:	217244-004	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	74	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	87	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	158348
Lab ID:	217244-004	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	74	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	87	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-5 COMP	Batch#:	158348
Lab ID:	217244-005	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	78	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	87	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-5 COMP	Batch#:	158348
Lab ID:	217244-005	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	78	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	87	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-10 COMP	Batch#:	158348
Lab ID:	217244-006	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	79	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	84	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L-10 COMP	Batch#:	158348
Lab ID:	217244-006	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	79	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	84	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	158348
Lab ID:	217244-007	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	17	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	14	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	7.2	0.5
Chlorobenzene	ND	0.5
Bromoform	2.0	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	76	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	83	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	158348
Lab ID:	217244-007	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	76	73-140
Toluene-d8	93	88-113
Bromofluorobenzene	83	80-127

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC526035	Batch#:	158348
Matrix:	Water	Analyzed:	12/17/09
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	29.80	119	71-136
Trichloroethene	25.00	26.23	105	80-124
Chlorobenzene	25.00	27.00	108	84-118

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	74	73-140
Toluene-d8	90	88-113
Bromofluorobenzene	80	80-127

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC526035	Batch#:	158348
Matrix:	Water	Analyzed:	12/17/09
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	22.13	89	61-123
Benzene	25.00	27.28	109	81-122
Toluene	25.00	25.09	100	82-122
Ethylbenzene	25.00	24.63	99	86-125
m,p-Xylenes	50.00	52.55	105	83-127
o-Xylene	25.00	24.81	99	81-122

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	74	73-140
Toluene-d8	90	88-113
Bromofluorobenzene	80	80-127

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC526036	Batch#:	158348
Matrix:	Water	Analyzed:	12/17/09
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	78	73-140
Toluene-d8	92	88-113
Bromofluorobenzene	85	80-127

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC526036	Batch#:	158348
Matrix:	Water	Analyzed:	12/17/09
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	78	73-140
Toluene-d8	92	88-113
Bromofluorobenzene	85	80-127

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	158348
MSS Lab ID:	217161-002	Sampled:	12/03/09
Matrix:	Water	Received:	12/10/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Type: MS Lab ID: QC526058

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	<0.1002	25.00	34.85	139	68-144
Trichloroethene	0.1318	25.00	26.35	105	63-142
Chlorobenzene	<0.1000	25.00	27.72	111	84-118

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	79	73-140
Toluene-d8	91	88-113
Bromofluorobenzene	86	80-127

Type: MSD Lab ID: QC526059

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	33.57	134	68-144	4	14
Trichloroethene	25.00	25.92	103	63-142	2	12
Chlorobenzene	25.00	27.53	110	84-118	1	11

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	78	73-140
Toluene-d8	91	88-113
Bromofluorobenzene	84	80-127

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	158348
MSS Lab ID:	217161-002	Sampled:	12/03/09
Matrix:	Water	Received:	12/10/09
Units:	ug/L	Analyzed:	12/17/09
Diln Fac:	1.000		

Type: MS Lab ID: QC526058

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<0.1090	25.00	25.94	104	59-128
Benzene	<0.1000	25.00	29.74	119	75-130
Toluene	<0.1000	25.00	26.17	105	79-129
Ethylbenzene	<0.1000	25.00	25.79	103	81-130
m,p-Xylenes	<0.1000	50.00	54.25	109	77-133
o-Xylene	<0.1000	25.00	25.02	100	82-123

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	79	73-140
Toluene-d8	91	88-113
Bromofluorobenzene	86	80-127

Type: MSD Lab ID: QC526059

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	25.83	103	59-128	0	12
Benzene	25.00	29.41	118	75-130	1	11
Toluene	25.00	25.99	104	79-129	1	12
Ethylbenzene	25.00	25.45	102	81-130	1	12
m,p-Xylenes	50.00	53.77	108	77-133	1	12
o-Xylene	25.00	24.80	99	82-123	1	11

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	78	73-140
Toluene-d8	91	88-113
Bromofluorobenzene	84	80-127

RPD= Relative Percent Difference

Boron

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Prepared:	12/15/09
Diln Fac:	1.000	Analyzed:	12/16/09
Batch#:	158285		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	217244-001	170	100
MW-2	SAMPLE	217244-002	140	100
MW-3	SAMPLE	217244-003	180	100
MW-4	SAMPLE	217244-004	150	100
L-5 COMP	SAMPLE	217244-005	260	100
L-10 COMP	SAMPLE	217244-006	280	100
SOURCE	SAMPLE	217244-007	380	100
	BLANK	QC525744	ND	100

ND= Not Detected
RL= Reporting Limit

Calcium

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Prepared:	12/15/09
Batch#:	158285	Analyzed:	12/16/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	217244-001	65,000	500	1.000
MW-2	SAMPLE	217244-002	49,000	500	1.000
MW-3	SAMPLE	217244-003	88,000	500	1.000
MW-4	SAMPLE	217244-004	64,000	500	1.000
L-5 COMP	SAMPLE	217244-005	120,000	30,000	100.0
L-10 COMP	SAMPLE	217244-006	130,000	30,000	100.0
SOURCE	SAMPLE	217244-007	46,000	500	1.000
	BLANK	QC525744	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Potassium

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Prepared:	12/15/09
Diln Fac:	1.000	Analyzed:	12/16/09
Batch#:	158285		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	217244-001	660	500
MW-2	SAMPLE	217244-002	840	500
MW-3	SAMPLE	217244-003	ND	500
MW-4	SAMPLE	217244-004	ND	500
L-5 COMP	SAMPLE	217244-005	3,200	500
L-10 COMP	SAMPLE	217244-006	1,300	500
SOURCE	SAMPLE	217244-007	13,000	500
	BLANK	QC525744	ND	500

ND= Not Detected
RL= Reporting Limit

Magnesium

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Prepared:	12/15/09
Batch#:	158285	Analyzed:	12/16/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	217244-001	41,000	500	1.000
MW-2	SAMPLE	217244-002	30,000	500	1.000
MW-3	SAMPLE	217244-003	53,000	500	1.000
MW-4	SAMPLE	217244-004	36,000	500	1.000
L-5 COMP	SAMPLE	217244-005	53,000	500	1.000
L-10 COMP	SAMPLE	217244-006	110,000	36,000	100.0
SOURCE	SAMPLE	217244-007	25,000	500	1.000
	BLANK	QC525744	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Sodium

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	ug/L	Prepared:	12/15/09
Batch#:	158285	Analyzed:	12/16/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	217244-001	31,000	500	1.000
MW-2	SAMPLE	217244-002	23,000	500	1.000
MW-3	SAMPLE	217244-003	34,000	500	1.000
MW-4	SAMPLE	217244-004	25,000	500	1.000
L-5 COMP	SAMPLE	217244-005	140,000	50,000	100.0
L-10 COMP	SAMPLE	217244-006	63,000	500	1.000
SOURCE	SAMPLE	217244-007	140,000	50,000	100.0
	BLANK	QC525744	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Boron

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Batch#:	158285
Field ID:	ZZZZZZZZZZ	Sampled:	12/08/09
MSS Lab ID:	217081-001	Received:	12/08/09
Matrix:	Water	Prepared:	12/15/09
Units:	ug/L	Analyzed:	12/16/09
Diln Fac:	1.000		

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**
BS	QC525745		1,000	1,045	104	81-121		
BSD	QC525746		1,000	1,029	103	81-121	2	14
MS	QC525747	<29.49	1,000	977.5	98	64-136		
MSD	QC525748		1,000	873.3	87	64-136	11	20

RPD= Relative Percent Difference

Batch QC Report

Calcium

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Batch#:	158285
Field ID:	ZZZZZZZZZZ	Sampled:	12/08/09
MSS Lab ID:	217081-001	Received:	12/08/09
Matrix:	Water	Prepared:	12/15/09
Units:	ug/L	Analyzed:	12/16/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC525745		20,000	21,320	107	71-129		
BSD	QC525746		20,000	20,180	101	71-129	5	17
MS	QC525747	4,155	20,000	23,140	95	42-148		
MSD	QC525748		20,000	20,940	84	42-148	10	29

RPD= Relative Percent Difference

Batch QC Report

Potassium

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Batch#:	158285
Field ID:	ZZZZZZZZZZ	Sampled:	12/08/09
MSS Lab ID:	217081-001	Received:	12/08/09
Matrix:	Water	Prepared:	12/15/09
Units:	ug/L	Analyzed:	12/16/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC525745		10,000	10,010	100	67-123		
BSD	QC525746		10,000	9,680	97	67-123	3	21
MS	QC525747	572.9	10,000	9,713	91	51-141		
MSD	QC525748		10,000	8,773	82	51-141	10	26

RPD= Relative Percent Difference

Batch QC Report

Magnesium

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Batch#:	158285
Field ID:	ZZZZZZZZZZ	Sampled:	12/08/09
MSS Lab ID:	217081-001	Received:	12/08/09
Matrix:	Water	Prepared:	12/15/09
Units:	ug/L	Analyzed:	12/16/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC525745		20,000	20,980	105	71-130		
BSD	QC525746		20,000	20,170	101	71-130	4	20
MS	QC525747	847.5	20,000	19,570	94	48-142		
MSD	QC525748		20,000	17,630	84	48-142	10	24

RPD= Relative Percent Difference

Batch QC Report

Sodium

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Batch#:	158285
Field ID:	ZZZZZZZZZZ	Sampled:	12/08/09
MSS Lab ID:	217081-001	Received:	12/08/09
Matrix:	Water	Prepared:	12/15/09
Units:	ug/L	Analyzed:	12/16/09
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC525745		20,000	21,190	106	71-127		
BSD	QC525746		20,000	20,460	102	71-127	4	21
MS	QC525747	24,260	20,000	42,640	92	45-148		
MSD	QC525748		20,000	38,910	73	45-148	9	29

RPD= Relative Percent Difference

Curtis & Tompkins Laboratories Analytical Report

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	158236
Units:	mg/L	Received:	12/14/09

Field ID:	MW-1	Lab ID:	217244-001
Type:	SAMPLE	Sampled:	12/14/09 09:20

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	57	1.0	5.000	12/15/09 12:10
Nitrogen, Nitrite	ND	0.05	1.000	12/15/09 09:09
Nitrogen, Nitrate	2.7	0.05	1.000	12/15/09 09:09
Sulfate	63	2.5	5.000	12/15/09 12:10

Field ID:	MW-2	Lab ID:	217244-002
Type:	SAMPLE	Sampled:	12/14/09 10:45

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	29	1.0	5.000	12/15/09 13:02
Nitrogen, Nitrite	ND	0.05	1.000	12/15/09 09:26
Nitrogen, Nitrate	2.1	0.05	1.000	12/15/09 09:26
Sulfate	35	0.50	1.000	12/15/09 09:26

Field ID:	MW-3	Lab ID:	217244-003
Type:	SAMPLE	Sampled:	12/14/09 12:50

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	71	1.0	5.000	12/15/09 13:19
Nitrogen, Nitrite	ND	0.05	1.000	12/15/09 09:43
Nitrogen, Nitrate	3.4	0.05	1.000	12/15/09 09:43
Sulfate	60	2.5	5.000	12/15/09 13:19

Field ID:	MW-4	Lab ID:	217244-004
Type:	SAMPLE	Sampled:	12/14/09 11:45

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	59	1.0	5.000	12/15/09 13:37
Nitrogen, Nitrite	ND	0.05	1.000	12/15/09 10:01
Nitrogen, Nitrate	1.7	0.05	1.000	12/15/09 10:01
Sulfate	59	2.5	5.000	12/15/09 13:37

Field ID:	L-5 COMP	Lab ID:	217244-005
Type:	SAMPLE	Sampled:	12/14/09

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	150	2.0	10.00	12/15/09 13:54
Nitrogen, Nitrite	ND	0.05	1.000	12/15/09 10:53
Nitrogen, Nitrate	0.98	0.05	1.000	12/15/09 10:53
Sulfate	260	5.0	10.00	12/15/09 13:54

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	158236
Units:	mg/L	Received:	12/14/09

Field ID:	L-10 COMP	Lab ID:	217244-006
Type:	SAMPLE	Sampled:	12/14/09

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	120	2.0	10.00	12/15/09 14:12
Nitrogen, Nitrite	ND	0.05	1.000	12/15/09 10:36
Nitrogen, Nitrate	3.2	0.05	1.000	12/15/09 10:36
Sulfate	140	5.0	10.00	12/15/09 14:12

Field ID:	SOURCE	Lab ID:	217244-007
Type:	SAMPLE	Sampled:	12/14/09 09:30

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	200	2.0	10.00	12/15/09 16:31
Nitrogen, Nitrite	0.09	0.05	1.000	12/15/09 10:18
Nitrogen, Nitrate	10	0.25	5.000	12/15/09 11:17
Sulfate	94	2.5	5.000	12/15/09 11:17

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC525545	Analyzed:	12/15/09 08:34

Analyte	Result	RL
Chloride	ND	0.20
Nitrogen, Nitrite	ND	0.05
Nitrogen, Nitrate	ND	0.05
Sulfate	ND	0.50

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC525546	Batch#:	158236
Matrix:	Water	Analyzed:	12/15/09 08:51
Units:	mg/L		

Analyte	Spiked	Result	%REC	Limits
Chloride	4.000	4.051	101	90-109
Nitrogen, Nitrite	1.000	1.028	103	88-110
Nitrogen, Nitrate	1.000	1.010	101	89-110
Sulfate	10.00	10.04	100	89-109

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Field ID:	MW-1	Diln Fac:	5.000
MSS Lab ID:	217244-001	Batch#:	158236
Matrix:	Water	Sampled:	12/14/09 09:20
Units:	mg/L	Received:	12/14/09

Type: MS Analyzed: 12/15/09 12:27
Lab ID: QC525547

Analyte	MSS Result	Spiked	Result	%REC		Limits
Chloride	57.22	10.00	67.37	102	NM	68-130
Nitrogen, Nitrite	<0.01287	2.500	2.711	108		74-136
Nitrogen, Nitrate	2.694	2.500	5.235	102		65-137
Sulfate	62.98	25.00	88.11	101		64-136

Type: MSD Analyzed: 12/15/09 12:45
Lab ID: QC525548

Analyte	Spiked	Result	%REC		Limits	RPD	Lim
Chloride	10.00	67.52	103	NM	68-130	0	4
Nitrogen, Nitrite	2.500	2.719	109		74-136	0	17
Nitrogen, Nitrate	2.500	5.243	102		65-137	0	6
Sulfate	25.00	88.75	103		64-136	1	5

NM= Not Meaningful: Sample concentration > 4X spike concentration
RPD= Relative Percent Difference

Alkalinity

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	12/14/09
Units:	mg/L	Received:	12/14/09
Batch#:	158416	Analyzed:	12/18/09

Field ID: MW-1 Lab ID: 217244-001
Type: SAMPLE

Analyte	Result	RL	Diln Fac
Alkalinity, Bicarbonate	300	4.0	4.000
Alkalinity, Carbonate	ND	6.7	6.700
Alkalinity, Hydroxide	ND	6.7	6.700
Alkalinity, Total as CaCO3	300	6.7	6.700

Field ID: MW-2 Lab ID: 217244-002
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	280	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	280	6.7

Field ID: MW-3 Lab ID: 217244-003
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	440	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	440	6.7

Field ID: MW-4 Lab ID: 217244-004
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	350	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	350	6.7

Field ID: L-5 COMP Lab ID: 217244-005
Type: SAMPLE Diln Fac: 6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	590	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	590	6.7

ND= Not Detected
RL= Reporting Limit

Alkalinity

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	12/14/09
Units:	mg/L	Received:	12/14/09
Batch#:	158416	Analyzed:	12/18/09

Field ID:	L-10 COMP	Lab ID:	217244-006
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	700	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	700	6.7

Field ID:	SOURCE	Lab ID:	217244-007
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	170	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	170	6.7

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC526286		

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Alkalinity

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Units:	mg/L
Type:	LCS	Diln Fac:	4.000
Lab ID:	QC526287	Batch#:	158416
Matrix:	Water	Analyzed:	12/18/09

Spiked	**Result**	**%REC**	**Limits**
200.0	196.0	98	91-103

Batch QC Report

Alkalinity

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Diln Fac:	4.000
Field ID:	ZZZZZZZZZZ	Batch#:	158416
MSS Lab ID:	217099-012	Sampled:	12/08/09
Matrix:	Water	Received:	12/08/09
Units:	mg/L	Analyzed:	12/18/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC526288	257.3	200.0	445.2	94	80-118		
MSD	QC526289		200.0	448.0	95	80-118	1	2

RPD= Relative Percent Difference

Total Cyanide

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	158523
Field ID:	SOURCE	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	mg/L	Analyzed:	12/22/09
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	217244-007	0.01	0.01
BLANK	QC526728	ND	0.01

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Cyanide

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	158523
MSS Lab ID:	217163-004	Sampled:	12/10/09
Matrix:	Water	Received:	12/10/09
Units:	mg/L	Analyzed:	12/22/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC526729	<0.01000	0.2000	0.1936	97	46-143		
MSD	QC526730		0.2000	0.2044	102	46-143	5	17
LCS	QC526731		0.2000	0.2078	104	79-119		

RPD= Relative Percent Difference

Dissolved Organic Carbon (DOC)

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Batch#:	158241
Matrix:	Water	Sampled:	12/14/09
Units:	mg/L	Received:	12/14/09
Diln Fac:	1.000	Analyzed:	12/16/09

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	217244-001	ND	1.0
MW-2	SAMPLE	217244-002	ND	1.0
MW-3	SAMPLE	217244-003	ND	1.0
MW-4	SAMPLE	217244-004	ND	1.0
L-5 COMP	SAMPLE	217244-005	6.8	1.0
L-10 COMP	SAMPLE	217244-006	3.3	1.0
SOURCE	SAMPLE	217244-007	5.1	1.0
	BLANK	QC525564	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Dissolved Organic Carbon (DOC)

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	158241
MSS Lab ID:	217172-015	Sampled:	12/09/09
Matrix:	Water	Received:	12/10/09
Units:	mg/L	Analyzed:	12/16/09

Type	Lab ID	MSS Result	Spiked	Result	%REC		Limits	RPD	Lim
LCS	QC525565		10.00	9.718	97		90-110		
MS	QC525566	10.99	2.000	13.03	102	NM	62-139		
MSD	QC525567		2.000	13.17	109	NM	62-139	1	17

NM= Not Meaningful: Sample concentration > 4X spike concentration
RPD= Relative Percent Difference

Surfactants (MBAS)

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	158274
Field ID:	SOURCE	Sampled:	12/14/09 09:30
Matrix:	Water	Received:	12/14/09
Units:	mg/L	Prepared:	12/15/09 17:15
Diln Fac:	1.000	Analyzed:	12/16/09 15:39

Type	Lab ID	Result	RL
SAMPLE	217244-007	ND	0.20
BLANK	QC525686	ND	0.20

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Surfactants (MBAS)

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	158274
Field ID:	SOURCE	Sampled:	12/14/09 09:30
MSS Lab ID:	217244-007	Received:	12/14/09
Matrix:	Water	Prepared:	12/15/09 17:15
Units:	mg/L	Analyzed:	12/16/09 15:39
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC		Limits	RPD	Lim
LCS	QC525687		0.6000	0.6562	109		80-120		
MS	QC525688	<0.2000	0.6000	0.8365	139	*	70-130		
MSD	QC525689		0.6000	0.7064	118		70-130	17	30

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Total Phosphorous

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	mg/L	Analyzed:	12/18/09
Batch#:	158420		

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	217244-001	0.86	0.060	2.000
MW-2	SAMPLE	217244-002	0.068	0.030	1.000
MW-3	SAMPLE	217244-003	0.10	0.030	1.000
MW-4	SAMPLE	217244-004	ND	0.030	1.000
L-5 COMP	SAMPLE	217244-005	0.050	0.030	1.000
L-10 COMP	SAMPLE	217244-006	0.040	0.030	1.000
SOURCE	SAMPLE	217244-007	0.22	0.030	1.000
	BLANK	QC526304	ND	0.030	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Phosphorous

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Batch#:	158420
Field ID:	ZZZZZZZZZZ	Sampled:	12/14/09
MSS Lab ID:	217240-003	Received:	12/14/09
Matrix:	Water	Analyzed:	12/18/09
Units:	mg/L		

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**	**Diln Fac**
MS	QC526305	0.6669	0.1980	1.205	272 *	41-144			5.000
MSD	QC526306		0.1980	0.8967	116	41-144	29 *	24	5.000
LCS	QC526307		0.1980	0.2181	110	92-113			1.000

*= Value outside of QC limits; see narrative
RPD= Relative Percent Difference

Total Dissolved Solids (TDS)

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Sampled:	12/14/09
Matrix:	Water	Received:	12/14/09
Units:	mg/L	Prepared:	12/16/09
Batch#:	158322	Analyzed:	12/17/09

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	217244-001	520	10	1.000
MW-2	SAMPLE	217244-002	400	10	1.000
MW-3	SAMPLE	217244-003	640	10	1.000
MW-4	SAMPLE	217244-004	560	10	1.000
L-5 COMP	SAMPLE	217244-005	1,240	11	1.111
L-10 COMP	SAMPLE	217244-006	1,060	11	1.111
SOURCE	SAMPLE	217244-007	720	10	1.000
	BLANK	QC525911	ND	10	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Dissolved Solids (TDS)

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Batch#:	158322
Field ID:	ZZZZZZZZZZ	Sampled:	12/09/09
MSS Lab ID:	217131-006	Received:	12/09/09
Matrix:	Water	Prepared:	12/16/09
Units:	mg/L	Analyzed:	12/17/09

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim	Diln Fac
BS	QC525912		104.0	92.00		88	75-106			1.000
BSD	QC525913		104.0	88.00		85	75-106	4	15	1.000
SDUP	QC525914	1,713		1,717	16.67			0	12	1.667

RL= Reporting Limit
RPD= Relative Percent Difference

Total Organic Carbon (TOC)

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Batch#:	158307
Matrix:	Water	Sampled:	12/14/09
Units:	mg/L	Received:	12/14/09
Diln Fac:	1.000		

Field ID	Type	Lab ID	Result	RL	Analyzed
MW-1	SAMPLE	217244-001	0.73	0.50	12/17/09
MW-2	SAMPLE	217244-002	0.86	0.50	12/16/09
MW-3	SAMPLE	217244-003	ND	0.50	12/16/09
MW-4	SAMPLE	217244-004	ND	0.50	12/16/09
L-5 COMP	SAMPLE	217244-005	5.8	0.50	12/16/09
L-10 COMP	SAMPLE	217244-006	3.5	0.50	12/17/09
SOURCE	SAMPLE	217244-007	5.5	0.50	12/17/09
	BLANK	QC525842	ND	0.50	12/16/09

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Organic Carbon (TOC)

Lab #:	217244	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	158307
MSS Lab ID:	217099-012	Sampled:	12/08/09
Matrix:	Water	Received:	12/08/09
Units:	mg/L	Analyzed:	12/16/09

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC525843		10.00	9.593	96	90-110		
MS	QC525844	5.774	2.000	7.511	87	21-156		
MSD	QC525845		2.000	7.760	99	21-156	3	30

RPD= Relative Percent Difference

Laboratory Job Number 217244

Subcontracted Products

Columbia Analytical Services

Columbia Analytical Services^INC 1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

January 19, 2010 Analytical Report for Service Request No: K0912243

Micah Smith
Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

RE: Recycled Water Study/217244

Dear Micah:

Enclosed are the revised pages for the samples submitted to our laboratory on December 17, 2009. For your reference, these analyses have been assigned our service request number K0912243.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3281. You may also contact me via Email at PDivvela@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Pradeep Divvela
Project Chemist

PD/cb

Page 1 of 11

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0912243
Project:	Recycled Water Study/217244	**Date Collected:**	12/14/2009
Sample Matrix:	Water	**Date Received:**	12/17/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-1	**Units:**	ug/L
Lab Code:	K0912243-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	12/28/09	12/28/09	KWG0912186	
Bromoacetic Acid	ND	U	1.0	0.13	1	12/28/09	12/28/09	KWG0912186	
Dichloroacetic Acid	ND	U	1.0	0.18	1	12/28/09	12/28/09	KWG0912186	
Trichloroacetic Acid	ND	U	1.0	0.33	1	12/28/09	12/28/09	KWG0912186	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	12/28/09	12/28/09	KWG0912186	
Dibromoacetic Acid	ND	U	1.0	0.14	1	12/28/09	12/28/09	KWG0912186	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	105	70-130	12/28/09	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0912243
Project:	Recycled Water Study/217244	**Date Collected:**	12/14/2009
Sample Matrix:	Water	**Date Received:**	12/17/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-2	**Units:**	ug/L
Lab Code:	K0912243-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	12/28/09	12/28/09	KWG0912186	
Bromoacetic Acid	ND	U	1.0	0.13	1	12/28/09	12/28/09	KWG0912186	
Dichloroacetic Acid	ND	U	1.0	0.18	1	12/28/09	12/28/09	KWG0912186	
Trichloroacetic Acid	ND	U	1.0	0.33	1	12/28/09	12/28/09	KWG0912186	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	12/28/09	12/28/09	KWG0912186	
Dibromoacetic Acid	ND	U	1.0	0.14	1	12/28/09	12/28/09	KWG0912186	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	107	70-130	12/28/09	Acceptable

Comments: ____________________

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0912243
Project:	Recycled Water Study/217244	**Date Collected:**	12/14/2009
Sample Matrix:	Water	**Date Received:**	12/17/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-3	**Units:**	ug/L
Lab Code:	K0912243-003	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	12/28/09	12/28/09	KWG0912186	
Bromoacetic Acid	ND	U	0.99	0.13	1	12/28/09	12/28/09	KWG0912186	
Dichloroacetic Acid	ND	U	0.99	0.18	1	12/28/09	12/28/09	KWG0912186	
Trichloroacetic Acid	ND	U	0.99	0.33	1	12/28/09	12/28/09	KWG0912186	
Bromochloroacetic Acid	ND	U	0.99	0.15	1	12/28/09	12/28/09	KWG0912186	
Dibromoacetic Acid	ND	U	0.99	0.14	1	12/28/09	12/28/09	KWG0912186	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	109	70-130	12/28/09	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0912243
Project:	Recycled Water Study/217244	**Date Collected:**	12/14/2009
Sample Matrix:	Water	**Date Received:**	12/17/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-4	**Units:**	ug/L
Lab Code:	K0912243-004	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	12/28/09	12/28/09	KWG0912186	
Bromoacetic Acid	ND	U	1.0	0.13	1	12/28/09	12/28/09	KWG0912186	
Dichloroacetic Acid	ND	U	1.0	0.18	1	12/28/09	12/28/09	KWG0912186	
Trichloroacetic Acid	ND	U	1.0	0.33	1	12/28/09	12/28/09	KWG0912186	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	12/28/09	12/28/09	KWG0912186	
Dibromoacetic Acid	ND	U	1.0	0.14	1	12/28/09	12/28/09	KWG0912186	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	113	70-130	12/28/09	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0912243
Project:	Recycled Water Study/217244	**Date Collected:**	12/14/2009
Sample Matrix:	Water	**Date Received:**	12/17/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	L-5 Comp	**Units:**	ug/L
Lab Code:	K0912243-005	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromoacetic Acid	ND	U	1.0	0.13	1	12/28/09	12/28/09	KWG0912186	
Chloroacetic Acid	**1.5**	J	2.0	0.16	1	12/28/09	12/28/09	KWG0912186	
Dichloroacetic Acid	**0.26**	J	1.0	0.18	1	12/28/09	12/28/09	KWG0912186	
Trichloroacetic Acid	ND	U	1.0	0.33	1	12/28/09	12/28/09	KWG0912186	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	12/28/09	12/28/09	KWG0912186	
Dibromoacetic Acid	ND	U	1.0	0.14	1	12/28/09	12/28/09	KWG0912186	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	120	70-130	12/28/09	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0912243
Project:	Recycled Water Study/217244	**Date Collected:**	12/14/2009
Sample Matrix:	Water	**Date Received:**	12/17/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	L-10 Comp	**Units:**	ug/L
Lab Code:	K0912243-006	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromoacetic Acid	ND	U	1.0	0.13	1	12/28/09	12/28/09	KWG0912186	
Chloroacetic Acid	**0.65**	J	2.0	0.16	1	12/28/09	12/28/09	KWG0912186	
Dichloroacetic Acid	**0.42**	JP	1.0	0.18	1	12/28/09	12/28/09	KWG0912186	
Trichloroacetic Acid	ND	U	1.0	0.33	1	12/28/09	12/28/09	KWG0912186	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	12/28/09	12/28/09	KWG0912186	
Dibromoacetic Acid	ND	U	1.0	0.14	1	12/28/09	12/28/09	KWG0912186	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	105	70-130	12/28/09	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0912243
Project:	Recycled Water Study/217244	**Date Collected:**	12/14/2009
Sample Matrix:	Water	**Date Received:**	12/17/2009

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	Source	**Units:**	ug/L
Lab Code:	K0912243-007	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	12/28/09	12/28/09	KWG0912186	
Bromoacetic Acid	ND	U	0.99	0.13	1	12/28/09	12/28/09	KWG0912186	
Dichloroacetic Acid	**0.64**	JP	0.99	0.18	1	12/28/09	12/28/09	KWG0912186	
Trichloroacetic Acid	ND	U	0.99	0.33	1	12/28/09	12/28/09	KWG0912186	
Bromochloroacetic Acid	**0.22**	J	0.99	0.15	1	12/28/09	12/28/09	KWG0912186	
Dibromoacetic Acid	ND	U	0.99	0.14	1	12/28/09	12/28/09	KWG0912186	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	106	70-130	12/28/09	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0912243
Project:	Recycled Water Study/217244	**Date Collected:**	NA
Sample Matrix:	Drinking water	**Date Received:**	NA

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG0912186-3	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	12/28/09	12/28/09	KWG0912186	
Bromoacetic Acid	ND	U	1.0	0.13	1	12/28/09	12/28/09	KWG0912186	
Dichloroacetic Acid	ND	U	1.0	0.18	1	12/28/09	12/28/09	KWG0912186	
Trichloroacetic Acid	ND	U	1.0	0.33	1	12/28/09	12/28/09	KWG0912186	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	12/28/09	12/28/09	KWG0912186	
Dibromoacetic Acid	ND	U	1.0	0.14	1	12/28/09	12/28/09	KWG0912186	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	96	70-130	12/28/09	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0912243
Project:	Recycled Water Study/217244	**Date Extracted:**	12/28/2009
Sample Matrix:	Drinking water	**Date Analyzed:**	12/29/2009

Matrix Spike Summary
Haloacetic Acids by EPA MEthod 552.2

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K0912332-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2	**Extraction Lot:**	KWG0912186

		Batch QCMS KWG0912186-2 **Matrix Spike**			
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Chloroacetic Acid	ND	5.95	4.97	120	70-130
Bromoacetic Acid	ND	5.46	4.97	110	70-130
Dichloroacetic Acid	ND	5.47	4.97	110	70-130
Trichloroacetic Acid	ND	6.16	4.97	124	70-130
Bromochloroacetic Acid	ND	5.23	4.97	105	70-130
Dibromoacetic Acid	ND	5.53	4.97	111	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K0912243
Project:	Recycled Water Study/217244	**Date Extracted:**	12/28/2009
Sample Matrix:	Drinking water	**Date Analyzed:**	12/28/2009

Lab Control Spike Summary
Haloacetic Acids by EPA MEthod 552.2

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	552.2	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG0912186

	Lab Control Sample KWG0912186-1 **Lab Control Spike**			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Chloroacetic Acid	5.85	5.00	117	70-130
Bromoacetic Acid	5.51	5.00	110	70-130
Dichloroacetic Acid	5.27	5.00	105	70-130
Trichloroacetic Acid	5.90	5.00	118	70-130
Bromochloroacetic Acid	5.28	5.00	106	70-130
Dibromoacetic Acid	5.59	5.00	112	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200
EML ID: 609788

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
MPN-Standard Bacteria: 12-21-2009

Service SOPs: MPN-Standard Bacteria (100130)

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200

Date of Receipt: 12-14-2009
Date of Report: 12-21-2009

MPN REPORT

Location: MW-1 Lab ID-Version‡: 2702865-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	46	11	190
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

Location: MW-2 Lab ID-Version‡: 2702867-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	46	11	190
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

Location: MW-3 Lab ID-Version‡: 2702870-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	140	48	400
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.
**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200

Date of Receipt: 12-14-2009
Date of Report: 12-21-2009

MPN REPORT

Location: MW-4 Lab ID-Version‡: 2702872-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	5	1	20
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

Location: L5 Comp Lab ID-Version‡: 2702874-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	2	0.01	14
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

Location: L10 Comp Lab ID-Version‡: 2702876-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	< 2	-	14
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.
**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200

Date of Receipt: 12-14-2009
Date of Report: 12-21-2009

MPN REPORT

Location: Source

Lab ID-Version‡: 2702878-1

Sample size: 100 | Unit: 100 ml | Percent solid: N/A

Bacteria	Method	Setup Time	MPN*/Unit	LCL**	UCL**
Fecal Coliform	SM 9221 E	12/14/09 14:19	< 2	-	14
Total Coliform	SM 9221 B	12/14/09 14:19	22	9	54
E. coli	SM 9221 F	12/14/09 14:19	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.
**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200
EML ID: 609788

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 12-17-2009

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200

Date of Receipt: 12-14-2009
Date of Report: 12-17-2009

HETEROTROPHIC PLATE COUNT REPORT

Location:	MW-1	MW-2	MW-3
Comments (see below)	None	None	None
Lab ID-Version‡:	2702866-1	2702868-1	2702869-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	12/14/2009 at 02:18 PM	12/14/2009 at 02:18 PM	12/14/2009 at 02:18 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	7,800	3,500	810
Read Time	12/16/2009 at 02:45 PM	12/16/2009 at 02:45 PM	12/16/2009 at 02:45 PM

Comments:

Location:	MW-4	L5 Comp	L10 Comp
Comments (see below)	None	None	None
Lab ID-Version‡:	2702871-1	2702873-1	2702875-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	12/14/2009 at 02:18 PM	12/14/2009 at 02:18 PM	12/14/2009 at 02:18 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	1,000	3,400	2,800
Read Time	12/16/2009 at 02:45 PM	12/16/2009 at 02:45 PM	12/16/2009 at 02:45 PM

Comments:

Location:	Source
Comments (see below)	None
Lab ID-Version‡:	2702877-1
Sample Type	Water sample
Method	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10
Setup Time	12/14/2009 at 02:18 PM
Incubation Info	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml
CFU/Reporting Unit	> 57,000 (est.*)
Read Time	12/16/2009 at 02:45 PM

Comments:

* Estimated result

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

MWH LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
01/29/2010
Yolanda Martin
MWH LABORATORIES

YOM: Yolanda.O.Martin

Project Manager

01114CA

Report#: 321459
Project:
RECYCLED-WATER-STUDY
Group: Chemistry
PO#: B30-12470

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH Laboratories

750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 321459
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Yolanda.O.Martin
Phone: 626-386-1104
PO #: B30-12470

The following samples were received from you on **December 15, 2009**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id			Sample Date
200912150167	L-5 Composite			14-Dec-2009 00:00
	@NDMA_SPE			
200912150168	L-10 Composite			14-Dec-2009 00:00
	@NDMA_SPE	@PFC		
200912150169	MW-1			14-Dec-2009 09:20
	@NDMA_SPE	@PFC		
200912150170	MW-2			14-Dec-2009 10:45
	@NDMA_SPE	@PFC		
200912150171	MW-3			14-Dec-2009 12:50
	@NDMA_SPE	@PFC		
200912150172	MW-4			14-Dec-2009 11:45
	@NDMA_SPE	@PFC		
200912150173	Source			14-Dec-2009 09:30
	@525PLUS	@NDMA_SPE	@PFC	
	EDTA			

Test Description

@525PLUS -- Semivolatiles by GCMS
@NDMA_SPE -- Nitrosamines by GCMS
@PFC -- Perfluorinated compounds

MWH Laboratories
A Division of MWH Americas, Inc.

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

CHAIN OF CUSTODY RECORD

321459

ENTERED
12/15/09
June

MWH LABS USE ONLY:

LOGIN COMMENTS:

SAMPLE TEMP WHEN REC'D AT LAB: 5 (Compliance: 4 +/- 2*C)

CONDITION OF BLUE ICE: FROZEN ___ PARTIALLY FROZEN ___ THAWED ___

SAMPLES CHECKED AGAINST COC BY: JMH JT

SAMPLES LOGGED IN BY: JMH

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: Locus Technologies

PROJECT CODE: 27011-07-7000

(check for yes) COMPLIANCE SAMPLES - Requires state forms ☐ ☐

(check for yes) NON-COMPLIANCE SAMPLES ☐ REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: Locus

COC ID:

SAMPLE GROUP:

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

SAMPLER PRINTED NAME AND SIGNATURE: H. Castro/T. Murphy/

TAT requested: rush by adv notice only
STD ✗ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	Field Data Grab	Field Data Comp	NOMA	PFC's	EDTA	EPA525plus												SAMPLER COMMENTS
12/14/09	Comp	L5 comp	IOT	RGW		X	1 ✓	0	0	0												
	Comp	L10 comp				X	1 ✓	1 ✓	0	0												
	920	MW-1			X		2 ✓	1 ✓	0	0												
	1045	MW-2			X		2 ✓	1 ✓	0	0												
	1250	MW-3			X		2 ✓	1 ✓	0	0												
	1145	MW-4			X		2 ✓	1 ✓	0	0												
	930	Source			X		2	1	1 ✓	2 ✓												

3/27

* MATRIX TYPES:
RSW = Raw Surface Water
[✓ RGW] = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
SEAW = Sea Water
WW = Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge
O = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		Henry Castro Jr.	Locus Tech	12-15-09	1210
RECEIVED BY:	Jane Herng	Jane Herrig	MWH	12-15-09	1211
RELINQUISHED BY:	Jane Herrig	Jane Herrig	MWH	12-15-09	15:44
RECEIVED BY:			MWH	12/16	830

C-O-C# ________

PAGE ____ OF ____

MWH
LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 321459

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
12/15/2009

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	200912150169	**MW-1**				
01/01/2010 09:04	N-Nitroso dimethylamine (NDMA)		2.9		ng/L	2
	200912150170	**MW-2**				
01/01/2010 09:48	N-Nitroso dimethylamine (NDMA)		3.6		ng/L	2
	200912150172	**MW-4**				
01/01/2010 11:16	N-Nitroso dimethylamine (NDMA)		2.8		ng/L	2
	200912150173	**Source**				
01/02/2010 11:02	N-Nitroso dimethylamine (NDMA)		390		ng/L	10
01/07/2010 19:21	Perfluoro octanesulfonate-PFOS		39		ng/L	5
01/07/2010 19:21	Perfluoro octanoic acid - PFOA		61		ng/L	5

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
12/15/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
L-5 Composite (200912150167)						**Sampled on**	**12/14/2009 00:00**	
		EPA 521 - Nitrosamines by GCMS						
12/17/2009	12/30/2009 02:48	536370	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/L	2	1
12/17/2009	12/30/2009 02:48	536370	(EPA 521)	NDMA-D6	98	%		1
L-10 Composite (200912150168)						**Sampled on**	**12/14/2009 00:00**	
		EPA 521 - Nitrosamines by GCMS						
12/28/2009	01/02/2010 10:18	536641	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND (S7)	ng/L	2	1
12/28/2009	01/02/2010 10:18	536641	(EPA 521)	NDMA-D6	69	%		1
		MWH PFC - Perfluorinated compounds						
	01/07/2010 18:23	538353	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	01/07/2010 18:23	538353	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	01/07/2010 18:23	538353	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	01/07/2010 18:23	538353	(MWH PFC)	PFBA-C13	100	%		1
	01/07/2010 18:23	538353	(MWH PFC)	PFOA-C13	90	%		1
	01/07/2010 18:23	538353	(MWH PFC)	PFOS-C13	55	%		1
MW-1 (200912150169)						**Sampled on**	**12/14/2009 09:20**	
		EPA 521 - Nitrosamines by GCMS						
12/28/2009	01/01/2010 09:04	536396	(EPA 521)	N-Nitroso dimethylamine (NDMA)	2.9	ng/L	2	1
12/28/2009	01/01/2010 09:04	536396	(EPA 521)	NDMA-D6	77	%		1
		MWH PFC - Perfluorinated compounds						
	01/07/2010 18:23	538353	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	01/07/2010 18:23	538353	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	01/07/2010 18:23	538353	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	01/07/2010 18:23	538353	(MWH PFC)	PFBA-C13	105	%		1
	01/07/2010 18:23	538353	(MWH PFC)	PFOA-C13	90	%		1
	01/07/2010 18:23	538353	(MWH PFC)	PFOS-C13	62	%		1
MW-2 (200912150170)						**Sampled on**	**12/14/2009 10:45**	
		EPA 521 - Nitrosamines by GCMS						
12/28/2009	01/01/2010 09:48	536396	(EPA 521)	N-Nitroso dimethylamine (NDMA)	3.6	ng/L	2	1
12/28/2009	01/01/2010 09:48	536396	(EPA 521)	NDMA-D6	79	%		1
		MWH PFC - Perfluorinated compounds						
	01/07/2010 18:46	538353	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2010	18:46	538353	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	01/07/2010	18:46	538353	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	01/07/2010	18:46	538353	(MWH PFC)	PFBA-C13	103	%		1
	01/07/2010	18:46	538353	(MWH PFC)	PFOA-C13	90	%		1
	01/07/2010	18:46	538353	(MWH PFC)	PFOS-C13	62	%		1

MW-3 (200912150171) **Sampled on 12/14/2009 12:50**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/28/2009	01/01/2010	10:32	536396	(EPA 521)	N-Nitroso dimethylamine (NDMA)	ND	ng/L	2	1
12/28/2009	01/01/2010	10:32	536396	(EPA 521)	NDMA-D6	75	%		1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2010	18:58	538353	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	01/07/2010	18:58	538353	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	01/07/2010	18:58	538353	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	01/07/2010	18:58	538353	(MWH PFC)	PFBA-C13	100	%		1
	01/07/2010	18:58	538353	(MWH PFC)	PFOA-C13	87	%		1
	01/07/2010	18:58	538353	(MWH PFC)	PFOS-C13	55	%		1

MW-4 (200912150172) **Sampled on 12/14/2009 11:45**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/28/2009	01/01/2010	11:16	536396	(EPA 521)	N-Nitroso dimethylamine (NDMA)	2.8	ng/L	2	1
12/28/2009	01/01/2010	11:16	536396	(EPA 521)	NDMA-D6	72	%		1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2010	19:09	538353	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	01/07/2010	19:09	538353	(MWH PFC)	Perfluoro octanesulfonate-PFOS	ND	ng/L	5	1
	01/07/2010	19:09	538353	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	01/07/2010	19:09	538353	(MWH PFC)	PFBA-C13	102	%		1
	01/07/2010	19:09	538353	(MWH PFC)	PFOA-C13	93	%		1
	01/07/2010	19:09	538353	(MWH PFC)	PFOS-C13	71	%		1

Source (200912150173) **Sampled on 12/14/2009 09:30**

EPA 525.2 - Semivolatiles by GCMS

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
12/15/2009

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Aldrin	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.6	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
12/15/2009

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Heptachlor	ND	ug/L	0.03	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
12/17/2009	12/18/2009 20:40	535482	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.2	1

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Samples Received on:
12/15/2009

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	95	%		1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Acenaphthene-d10	89	%		1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Chrysene-d12	85	%		1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Perylene-d12	81	%		1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Phenanthrene-d10	95	%		1
12/17/2009	12/18/2009	20:40	535482	(EPA 525.2)	Triphenylphosphate	103	%		1

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/02/2010	11:02	536641	(EPA 521)	N-Nitroso dimethylamine (NDMA)	390	ng/L	10	5
12/28/2009	01/01/2010	12:02	536396	(EPA 521)	NDMA-D6	77	%		1

MWH_MET - NTA and EDTA by Ion Chromatography

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	12/19/2009	02:07	535778	(MWH_MET)	EDTA	ND	mg/L	0.1	1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	01/07/2010	19:21	538353	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
	01/07/2010	19:21	538353	(MWH PFC)	Perfluoro octanesulfonate-PFOS	39	ng/L	5	1
	01/07/2010	19:21	538353	(MWH PFC)	Perfluoro octanoic acid - PFOA	61	ng/L	5	1
	01/07/2010	19:21	538353	(MWH PFC)	PFBA-C13	101	%		1
	01/07/2010	19:21	538353	(MWH PFC)	PFOA-C13	91	%		1
	01/07/2010	19:21	538353	(MWH PFC)	PFOS-C13	36	%		1

MWH
LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Comments
Report: #321459

Locus Technologies
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299 Fairchild Drive
Mountain View, CA 94043

Flags Legend:

S7 - Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.

The Comments Report may be blank if there are no comments for this report.

Locus Technologies

QC Ref # 535482 - Semivolatiles by GCMS **Analysis Date: 12/18/2009**

200912150173	Source	Analyzed by: JWC

QC Ref # 535778 - NTA and EDTA by Ion Chromatography **Analysis Date: 12/19/2009**

200912150173	Source	Analyzed by: DYM

QC Ref # 536370 - Nitrosamines by GCMS **Analysis Date: 12/30/2009**

200912150167	L-5 Composite	Analyzed by: KAM

QC Ref # 536396 - Nitrosamines by GCMS **Analysis Date: 01/01/2010**

200912150169	MW-1	Analyzed by: KAM
200912150170	MW-2	Analyzed by: KAM
200912150171	MW-3	Analyzed by: KAM
200912150172	MW-4	Analyzed by: KAM
200912150173	Source	Analyzed by: KAM

QC Ref # 536641 - Nitrosamines by GCMS **Analysis Date: 01/02/2010**

200912150168	L-10 Composite	Analyzed by: KAM
200912150168	L-10 Composite	Analyzed by: KAM
200912150173	Source	Analyzed by: KAM

QC Ref # 538353 - Perfluorinated compounds **Analysis Date: 01/07/2010**

200912150168	L-10 Composite	Analyzed by: LHZ
200912150169	MW-1	Analyzed by: LHZ
200912150170	MW-2	Analyzed by: LHZ
200912150171	MW-3	Analyzed by: LHZ
200912150172	MW-4	Analyzed by: LHZ
200912150173	Source	Analyzed by: LHZ

Locus Technologies

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 535318 - Nitrosamines by GCMS by EPA 521						**Analysis Date: 12/17/2009**			
LCS1	N-Nitroso dimethylamine (NDMA)		40	37.0	ng/L	93	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	2.88	ng/L	144	(50-150)		
MS1_200912180005	N-Nitroso dimethylamine (NDMA)	3.9	2.0	4.61	ng/L	**35**	(50-150)		
MSD1_200912180005	N-Nitroso dimethylamine (NDMA)	3.9	2.0	4.61	ng/L	**35**	(50-150)	30	0.57
LCS1	N-Nitrosodi-n-propylamin(NDPA)		40	38.5	ng/L	96	(70-130)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/L				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2.0	3.76	ng/L	**188**	(50-150)		
MS1_200912180005	N-Nitrosodi-n-propylamin(NDPA)	ND	2.0	2.49	ng/L	125	(50-150)		
MSD1_200912180005	N-Nitrosodi-n-propylamin(NDPA)	ND	2.0	3.7	ng/L	**185**	(50-150)	30	**39**
LCS1	N-Nitrosodibutylamine (NDBA)		40	36.4	ng/L	91	(70-130)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/L				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2.0	2.26	ng/L	113	(50-150)		
MS1_200912180005	N-Nitrosodibutylamine (NDBA)	ND	2.0	2.53	ng/L	126	(50-150)		
MSD1_200912180005	N-Nitrosodibutylamine (NDBA)	ND	2.0	2.37	ng/L	119	(50-150)	30	5.7
LCS1	N-Nitrosodiethylamine (NDEA)		40	28.8	ng/L	72	(70-130)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/L				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2.0	1.21	ng/L	60	(50-150)		
MS1_200912180005	N-Nitrosodiethylamine (NDEA)	ND	2.0	2.2	ng/L	110	(50-150)		
MSD1_200912180005	N-Nitrosodiethylamine (NDEA)	ND	2.0	2.24	ng/L	112	(50-150)	30	1.8
LCS1	N-Nitrosomethylethylamin(NMEA)		40	37.7	ng/L	94	(70-130)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/L				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2.0	2.17	ng/L	108	(50-150)		
MS1_200912180005	N-Nitrosomethylethylamin(NMEA)	ND	2.0	2.02	ng/L	91	(50-150)		
MSD1_200912180005	N-Nitrosomethylethylamin(NMEA)	ND	2.0	2.01	ng/L	91	(50-150)	30	0.33
LCS1	N-Nitrosomorpholine		40	45.6	ng/l	114	(70-130)		
MBLK	N-Nitrosomorpholine			0	ng/l				
MRL_CHK	N-Nitrosomorpholine		2.0	2.29	ng/l	115	(50-150)		
MS1_200912180005	N-Nitrosomorpholine	ND	2.0	2.7	ng/l	135	(50-150)		
MSD1_200912180005	N-Nitrosomorpholine	ND	2.0	2.72	ng/l	136	(50-150)	30	0.74
LCS1	N-Nitrosopiperidine (NPIP)		40	39.7	ng/L	99	(70-130)		
MBLK	N-Nitrosopiperidine (NPIP)			<2	ng/L				
MRL_CHK	N-Nitrosopiperidine (NPIP)		2.0	2.2	ng/L	110	(50-150)		
MS1_200912180005	N-Nitrosopiperidine (NPIP)	ND	2.0	2.34	ng/L	117	(50-150)		
MSD1_200912180005	N-Nitrosopiperidine (NPIP)	ND	2.0	2.2	ng/l	110	(50-150)	30	6.2
LCS1	N-Nitrosopyrollidine (NPYR)		40	44.0	ng/L	110	(70-130)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2.0	2.12	ng/L	106	(50-150)		
MS1_200912180005	N-Nitrosopyrollidine (NPYR)	ND	2.0	2.02	ng/L	101	(50-150)		
MSD1_200912180005	N-Nitrosopyrollidine (NPYR)	ND	2.0	2.15	ng/L	108	(50-150)	30	6.7
LCS1	NDMA-D6 (S)			106	%	106	(70-130)		
MBLK	NDMA-D6 (S)			92.0	%	92	(70-130)		
MRL_CHK	NDMA-D6 (S)			96.9	%	97	(70-130)		
MS1_200912180005	NDMA-D6 (S)			87.2	%	87	(70-130)		
MSD1_200912180005	NDMA-D6 (S)			88.8	%	89	(70-130)		

QC Ref# 535482 - Semivolatiles by GCMS by EPA 525.2 **Analysis Date: 12/18/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,3-Dimethyl-2-nitrobenzene (S)			93.0	%	93	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)			98.3	%	98	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			95.3	%	95	(70-130)		
MRLHI	1,3-Dimethyl-2-nitrobenzene (S)			96.2	%	96	(70-130)		
MRLLW	1,3-Dimethyl-2-nitrobenzene (S)			97.5	%	98	(70-130)		
MRLMD	1,3-Dimethyl-2-nitrobenzene (S)			97.7	%	98	(70-130)		
MS_200912160001	1,3-Dimethyl-2-nitrobenzene (S)			97.1	%	97	(70-130)		
LCS1	2,4-Dinitrotoluene		2.0	1.81	ug/L	91	(70-130)		
LCS2	2,4-Dinitrotoluene		2.0	1.74	ug/L	87	(70-130)	20	3.9
MBLK	2,4-Dinitrotoluene			<0.05	ug/L				
MRLHI	2,4-Dinitrotoluene		0.1	0.119	ug/L	119	(50-150)		
MS_200912160001	2,4-Dinitrotoluene		2.0	1.76	ug/L	88	(70-130)		
LCS1	2,6-Dinitrotoluene		2.0	1.83	ug/L	92	(70-130)		
LCS2	2,6-Dinitrotoluene		2.0	1.78	ug/L	89	(70-130)	20	2.8
MBLK	2,6-Dinitrotoluene			<0.05	ug/L				
MRLHI	2,6-Dinitrotoluene		0.1	0.0870	ug/L	87	(50-150)		
MS_200912160001	2,6-Dinitrotoluene		2.0	1.76	ug/L	88	(70-130)		
LCS1	4,4-DDD		2.0	1.81	ug/L	90	(70-130)		
LCS2	4,4-DDD		2.0	1.83	ug/L	91	(70-130)	20	1.1
MBLK	4,4-DDD			<0.05	ug/L				
MRLHI	4,4-DDD		0.1	0.106	ug/L	106	(50-150)		
MS_200912160001	4,4-DDD		2.0	1.82	ug/L	91	(70-130)		
LCS1	4,4-DDE		2.0	1.89	ug/L	94	(70-130)		
LCS2	4,4-DDE		2.0	1.87	ug/L	93	(70-130)	20	1.1
MBLK	4,4-DDE			<0.05	ug/L				
MRLHI	4,4-DDE		0.1	0.0890	ug/L	89	(50-150)		
MS_200912160001	4,4-DDE		2.0	1.82	ug/L	91	(70-130)		
LCS1	4,4-DDT		2.0	1.86	ug/L	93	(70-130)		

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(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	4,4-DDT		2.0	1.76	ug/L	88	(70-130)	20	5.5
MBLK	4,4-DDT			<0.05	ug/L				
MRLHI	4,4-DDT		0.1	0.106	ug/L	106	(50-150)		
MS_200912160001	4,4-DDT		2.0	1.84	ug/L	92	(70-130)		
LCS1	Acenaphthene		2.0	1.89	ug/L	95	(70-130)		
LCS2	Acenaphthene		2.0	1.89	ug/L	95	(70-130)	20	0.0
MBLK	Acenaphthene			<0.05	ug/L				
MRLHI	Acenaphthene		0.1	0.0980	ug/L	98	(50-150)		
MS_200912160001	Acenaphthene		2.0	1.82	ug/L	91	(70-130)		
LCS1	Acenaphthene-d10 (I)			82.7	%	83	(50-150)		
LCS2	Acenaphthene-d10 (I)			79.6	%	80	(50-150)		
MBLK	Acenaphthene-d10 (I)			91.7	%	92	(50-150)		
MRLHI	Acenaphthene-d10 (I)			84.5	%	85	(50-150)		
MRLLW	Acenaphthene-d10 (I)			87.8	%	88	(50-150)		
MRLMD	Acenaphthene-d10 (I)			93.7	%	94	(50-150)		
MS_200912160001	Acenaphthene-d10 (I)			88.4	%	88	(50-150)		
LCS1	Acenaphthylene		2.0	1.9	ug/L	95	(70-130)		
LCS2	Acenaphthylene		2.0	1.9	ug/L	95	(70-130)	20	0.0
MBLK	Acenaphthylene			<0.05	ug/L				
MRLHI	Acenaphthylene		0.1	0.0930	ug/L	93	(50-150)		
MS_200912160001	Acenaphthylene		2.0	1.85	ug/L	92	(70-130)		
LCS1	Acetochlor		2.0	1.88	ug/L	94	(70-130)		
LCS2	Acetochlor		2.0	1.9	ug/L	95	(70-130)	20	1.1
MBLK	Acetochlor			<0.05	ug/L				
MRLHI	Acetochlor		0.1	0.0940	ug/L	94	(50-150)		
MS_200912160001	Acetochlor		2.0	1.85	ug/L	92	(70-130)		
LCS1	Alachlor		2.0	1.91	ug/L	96	(70-130)		
LCS2	Alachlor		2.0	1.89	ug/L	95	(70-130)	20	1.1
MBLK	Alachlor			<0.025	ug/L				
MRLHI	Alachlor		0.1	0.100	ug/L	100	(50-150)		
MRLMD	Alachlor		0.05	0.0530	ug/L	106	(50-150)		
MS_200912160001	Alachlor		2.0	1.86	ug/L	93	(70-130)		
LCS1	Aldrin		2.0	1.85	ug/L	92	(70-130)		
LCS2	Aldrin		2.0	1.74	ug/L	87	(70-130)	20	6.1
MBLK	Aldrin			<0.025	ug/L				
MRLHI	Aldrin		0.1	0.0770	ug/L	77	(50-150)		
MRLMD	Aldrin		0.05	0.0530	ug/L	106	(50-150)		
MS_200912160001	Aldrin		2.0	1.74	ug/L	87	(70-130)		

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(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Alpha-BHC		2.0	1.99	ug/L	99	(70-130)		
LCS2	Alpha-BHC		2.0	2.00	ug/L	100	(70-130)	20	0.50
MBLK	Alpha-BHC			<0.05	ug/L				
MRLHI	Alpha-BHC		0.1	0.0970	ug/L	97	(50-150)		
MS_200912160001	Alpha-BHC		2.0	1.87	ug/L	93	(70-130)		
LCS1	alpha-Chlordane		2.0	1.92	ug/L	96	(70-130)		
LCS2	alpha-Chlordane		2.0	1.95	ug/L	98	(70-130)	20	1.6
MBLK	alpha-Chlordane			<0.025	ug/L				
MRLHI	alpha-Chlordane		0.1	0.0970	ug/L	97	(50-150)		
MRLMD	alpha-Chlordane		0.05	0.0520	ug/L	104	(50-150)		
MS_200912160001	alpha-Chlordane		2.0	1.87	ug/L	94	(70-130)		
LCS1	Anthracene		2.0	1.89	ug/L	94	(70-130)		
LCS2	Anthracene		2.0	1.86	ug/L	93	(70-130)	20	1.6
MBLK	Anthracene			<0.01	ug/L				
MRLHI	Anthracene		0.1	0.0910	ug/L	91	(50-150)		
MRLLW	Anthracene		0.02	0.0200	ug/L	100	(50-150)		
MRLMD	Anthracene		0.05	0.0430	ug/L	86	(50-150)		
MS_200912160001	Anthracene		2.0	1.81	ug/L	90	(70-130)		
LCS1	Atrazine		2.0	2.02	ug/L	101	(70-130)		
LCS2	Atrazine		2.0	2.06	ug/L	103	(70-130)	20	2.0
MBLK	Atrazine			<0.025	ug/L				
MRLHI	Atrazine		0.1	0.111	ug/L	111	(50-150)		
MRLMD	Atrazine		0.05	0.0430	ug/L	86	(50-150)		
MS_200912160001	Atrazine	ND	2.0	1.95	ug/L	98	(70-130)		
LCS1	Benz(a)Anthracene		2.0	1.78	ug/L	89	(70-130)		
LCS2	Benz(a)Anthracene		2.0	1.73	ug/L	87	(70-130)	20	2.9
MBLK	Benz(a)Anthracene			<0.025	ug/L				
MRLHI	Benz(a)Anthracene		0.1	0.0960	ug/L	96	(50-150)		
MRLMD	Benz(a)Anthracene		0.05	0.0470	ug/L	94	(50-150)		
MS_200912160001	Benz(a)Anthracene		2.0	1.74	ug/L	87	(70-130)		
LCS1	Benzo(a)pyrene		2.0	1.92	ug/L	96	(70-130)		
LCS2	Benzo(a)pyrene		2.0	1.95	ug/L	97	(70-130)	20	1.6
MBLK	Benzo(a)pyrene			<0.01	ug/L				
MRLHI	Benzo(a)pyrene		0.1	0.0970	ug/L	97	(50-150)		
MRLLW	Benzo(a)pyrene		0.02	0.0230	ug/L	115	(50-150)		
MRLMD	Benzo(a)pyrene		0.05	0.0450	ug/L	90	(50-150)		
MS_200912160001	Benzo(a)pyrene	ND	2.0	1.88	ug/L	94	(70-130)		
LCS1	Benzo(b)Fluoranthene		2.0	1.86	ug/L	93	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Benzo(b)Fluoranthene		2.0	1.87	ug/L	94	(70-130)	20	0.54
MBLK	Benzo(b)Fluoranthene			<0.01	ug/L				
MRLHI	Benzo(b)Fluoranthene		0.1	0.110	ug/L	110	(50-150)		
MRLLW	Benzo(b)Fluoranthene		0.02	0.0250	ug/L	125	(50-150)		
MRLMD	Benzo(b)Fluoranthene		0.05	0.0530	ug/L	106	(50-150)		
MS_200912160001	Benzo(b)Fluoranthene		2.0	1.93	ug/L	97	(70-130)		
LCS1	Benzo(g,h,i)Perylene		2.0	1.88	ug/L	94	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2.0	1.92	ug/L	96	(70-130)	20	2.1
MBLK	Benzo(g,h,i)Perylene			<0.025	ug/L				
MRLHI	Benzo(g,h,i)Perylene		0.1	0.0920	ug/L	92	(50-150)		
MRLMD	Benzo(g,h,i)Perylene		0.05	0.0510	ug/L	102	(50-150)		
MS_200912160001	Benzo(g,h,i)Perylene		2.0	1.78	ug/L	89	(70-130)		
LCS1	Benzo(k)Fluoranthene		2.0	1.9	ug/L	95	(70-130)		
LCS2	Benzo(k)Fluoranthene		2.0	2.05	ug/L	102	(70-130)	20	7.6
MBLK	Benzo(k)Fluoranthene			<0.01	ug/L				
MRLHI	Benzo(k)Fluoranthene		0.1	0.0880	ug/L	88	(50-150)		
MRLLW	Benzo(k)Fluoranthene		0.02	0.0200	ug/L	100	(50-150)		
MRLMD	Benzo(k)Fluoranthene		0.05	0.0520	ug/L	104	(50-150)		
MS_200912160001	Benzo(k)Fluoranthene		2.0	1.91	ug/L	96	(70-130)		
LCS1	Beta-BHC		2.0	2.12	ug/L	106	(70-130)		
LCS2	Beta-BHC		2.0	1.97	ug/L	99	(70-130)	20	7.3
MBLK	Beta-BHC			<0.05	ug/L				
MRLHI	Beta-BHC		0.1	0.0960	ug/L	96	(50-150)		
MS_200912160001	Beta-BHC		2.0	1.99	ug/L	99	(70-130)		
LCS1	Bromacil		2.0	1.86	ug/L	93	(70-130)		
LCS2	Bromacil		2.0	1.83	ug/L	92	(70-130)	20	1.6
MBLK	Bromacil			<0.05	ug/L				
MRLHI	Bromacil		0.1	0.109	ug/L	109	(50-150)		
MS_200912160001	Bromacil		2.0	1.78	ug/L	89	(70-130)		
LCS1	Butachlor		2.0	2.01	ug/L	100	(70-130)		
LCS2	Butachlor		2.0	1.97	ug/L	98	(70-130)	20	2.0
MBLK	Butachlor			<0.025	ug/L				
MRLHI	Butachlor		0.1	0.0870	ug/L	87	(50-150)		
MRLMD	Butachlor		0.05	0.0450	ug/L	90	(50-150)		
MS_200912160001	Butachlor		2.0	1.93	ug/L	97	(70-130)		
LCS1	Butylbenzylphthalate		2.0	1.99	ug/L	100	(70-130)		
LCS2	Butylbenzylphthalate		2.0	1.99	ug/L	99	(70-130)	20	0.0
MBLK	Butylbenzylphthalate			<0.15	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Butylbenzylphthalate		0.3	0.260	ug/L	87	(50-150)		
MS_200912160001	Butylbenzylphthalate		2.0	2.00	ug/L	100	(70-130)		
LCS1	Caffeine by method 525mod		2.0	1.55	ug/L	77	(45-137)		
LCS2	Caffeine by method 525mod		2.0	1.58	ug/L	79	(45-137)	20	1.9
MBLK	Caffeine by method 525mod			<0.01	ug/L				
MRLHI	Caffeine by method 525mod		0.1	0.106	ug/L	106	(50-150)		
MRLMD	Caffeine by method 525mod		0.05	0.0510	ug/L	102	(50-150)		
MS_200912160001	Caffeine by method 525mod		2.0	3.05	ug/L	**153**	(46-144)		
LCS1	Chlorobenzilate		2.0	1.97	ug/L	98	(70-130)		
LCS2	Chlorobenzilate		2.0	1.92	ug/L	96	(70-130)	20	2.6
MBLK	Chlorobenzilate			<0.05	ug/L				
MRLHI	Chlorobenzilate		0.1	0.0910	ug/L	91	(50-150)		
MS_200912160001	Chlorobenzilate		2.0	1.95	ug/L	98	(70-130)		
LCS1	Chloroneb		2.0	2.02	ug/L	101	(70-130)		
LCS2	Chloroneb		2.0	1.97	ug/L	99	(70-130)	20	2.5
MBLK	Chloroneb			<0.05	ug/L				
MRLHI	Chloroneb		0.1	0.104	ug/L	104	(50-150)		
MS_200912160001	Chloroneb		2.0	1.89	ug/L	94	(70-130)		
LCS1	Chlorothalonil(Draconil,Bravo)		2.0	1.94	ug/L	97	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2.0	1.93	ug/L	96	(70-130)	20	0.52
MBLK	Chlorothalonil(Draconil,Bravo)			<0.05	ug/L				
MRLHI	Chlorothalonil(Draconil,Bravo)		0.1	0.0900	ug/L	90	(50-150)		
MS_200912160001	Chlorothalonil(Draconil,Bravo)		2.0	1.89	ug/L	95	(70-130)		
LCS1	Chlorpyrifos (Dursban)		2.0	1.96	ug/L	98	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2.0	1.95	ug/L	98	(70-130)	20	0.51
MBLK	Chlorpyrifos (Dursban)			<0.025	ug/L				
MRLHI	Chlorpyrifos (Dursban)		0.1	0.106	ug/L	106	(50-150)		
MRLMD	Chlorpyrifos (Dursban)		0.05	0.0460	ug/L	92	(50-150)		
MS_200912160001	Chlorpyrifos (Dursban)		2.0	1.92	ug/L	96	(70-130)		
LCS1	Chrysene		2.0	1.88	ug/L	94	(70-130)		
LCS2	Chrysene		2.0	1.94	ug/L	97	(70-130)	20	3.1
MBLK	Chrysene			<0.01	ug/L				
MRLHI	Chrysene		0.1	0.0970	ug/L	97	(50-150)		
MRLLW	Chrysene		0.02	0.0200	ug/L	100	(50-150)		
MRLMD	Chrysene		0.05	0.0510	ug/L	102	(50-150)		
MS_200912160001	Chrysene		2.0	1.84	ug/L	92	(70-130)		
LCS1	Chrysene-d12 (I)			81.8	%	82	(50-150)		
LCS2	Chrysene-d12 (I)			74.1	%	74	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates
are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Chrysene-d12 (I)			78.4	%	78	(50-150)		
MRLHI	Chrysene-d12 (I)			75.9	%	76	(50-150)		
MRLLW	Chrysene-d12 (I)			75.1	%	75	(50-150)		
MRLMD	Chrysene-d12 (I)			81.4	%	81	(50-150)		
MS_200912160001	Chrysene-d12 (I)			86.5	%	87	(50-150)		
LCS1	Delta-BHC		2.0	1.91	ug/L	95	(70-130)		
LCS2	Delta-BHC		2.0	1.84	ug/L	92	(70-130)	20	3.7
MBLK	Delta-BHC			<0.05	ug/L				
MRLHI	Delta-BHC		0.1	0.120	ug/L	120	(50-150)		
MS_200912160001	Delta-BHC		2.0	1.78	ug/L	89	(70-130)		
LCS1	Di(2-Ethylhexyl)phthalate		2.0	1.97	ug/L	99	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2.0	2.04	ug/L	102	(70-130)	20	4.0
MBLK	Di(2-Ethylhexyl)phthalate			<0.15	ug/L				
MRLHI	Di(2-Ethylhexyl)phthalate		0.3	0.291	ug/L	97	(50-150)		
MS_200912160001	Di(2-Ethylhexyl)phthalate	ND	2.0	1.98	ug/L	99	(70-130)		
LCS1	Di-(2-Ethylhexyl)adipate		2.0	1.96	ug/L	98	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2.0	1.97	ug/L	99	(70-130)	20	0.51
MBLK	Di-(2-Ethylhexyl)adipate			<0.15	ug/L				
MRLHI	Di-(2-Ethylhexyl)adipate		0.3	0.228	ug/L	76	(50-150)		
MS_200912160001	Di-(2-Ethylhexyl)adipate	ND	2.0	1.92	ug/L	96	(70-130)		
LCS1	Di-n-Butylphthalate		4.0	3.85	ug/L	96	(70-130)		
LCS2	Di-n-Butylphthalate		4.0	3.87	ug/L	97	(70-130)	20	0.52
MBLK	Di-n-Butylphthalate			<0.15	ug/L				
MRLHI	Di-n-Butylphthalate		0.4	0.354	ug/L	89	(50-150)		
MS_200912160001	Di-n-Butylphthalate		4.0	3.75	ug/L	94	(70-130)		
LCS1	Di-N-octylphthalate		2.0	1.8	ug/L	90	(70-130)		
LCS2	Di-N-octylphthalate		2.0	1.82	ug/L	91	(70-130)	20	1.1
MBLK	Di-N-octylphthalate			<0.05	ug/L				
MRLHI	Di-N-octylphthalate		0.1	0.100	ug/L	100	(50-150)		
MS_200912160001	Di-N-octylphthalate		2.0	1.73	ug/L	87	(70-130)		
LCS1	Diazinon (Qualitative)		2.0	1.71	ug/L	85	(70-130)		
LCS2	Diazinon (Qualitative)		2.0	1.7	ug/L	85	(70-130)	20	0.59
MBLK	Diazinon (Qualitative)			<0.05	ug/L				
MRLHI	Diazinon (Qualitative)		0.1	0.0870	ug/L	87	(50-150)		
MS_200912160001	Diazinon (Qualitative)		2.0	1.93	ug/L	96	(70-130)		
LCS1	Dibenz(a,h)Anthracene		2.0	1.8	ug/L	90	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2.0	1.87	ug/L	93	(70-130)	20	3.8
MBLK	Dibenz(a,h)Anthracene			<0.025	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Dibenz(a,h)Anthracene		0.1	0.0870	ug/L	87	(50-150)		
MRLMD	Dibenz(a,h)Anthracene		0.05	0.0520	ug/L	104	(50-150)		
MS_200912160001	Dibenz(a,h)Anthracene		2.0	1.7	ug/L	85	(70-130)		
LCS1	Dichlorvos (DDVP)		2.0	1.87	ug/L	93	(70-130)		
LCS2	Dichlorvos (DDVP)		2.0	1.87	ug/L	94	(70-130)	20	0.0
MBLK	Dichlorvos (DDVP)			<0.025	ug/L				
MRLHI	Dichlorvos (DDVP)		0.1	0.0940	ug/L	94	(50-150)		
MRLMD	Dichlorvos (DDVP)		0.05	0.0460	ug/L	92	(50-150)		
MS_200912160001	Dichlorvos (DDVP)		2.0	1.81	ug/L	91	(70-130)		
LCS1	Dieldrin		2.0	1.91	ug/L	95	(70-130)		
LCS2	Dieldrin		2.0	1.85	ug/L	93	(70-130)	20	3.2
MBLK	Dieldrin			<0.05	ug/L				
MRLHI	Dieldrin		0.1	0.101	ug/L	101	(50-150)		
MS_200912160001	Dieldrin		2.0	1.9	ug/L	95	(70-130)		
LCS1	Diethylphthalate		2.0	1.85	ug/L	93	(70-130)		
LCS2	Diethylphthalate		2.0	1.86	ug/L	93	(70-130)	20	0.54
MBLK	Diethylphthalate			<0.15	ug/L				
MRLHI	Diethylphthalate		0.3	0.305	ug/L	102	(50-150)		
MS_200912160001	Diethylphthalate		2.0	1.8	ug/L	90	(70-130)		
LCS1	Dimethoate		2.0	1.4	ug/L	70	(35-100)		
LCS2	Dimethoate		2.0	1.38	ug/L	69	(35-100)	20	1.4
MBLK	Dimethoate			<0.05	ug/L				
MRLHI	Dimethoate		0.1	0.0660	ug/L	66	(50-150)		
MS_200912160001	Dimethoate		2.0	1.51	ug/L	76	(34-111)		
LCS1	Dimethylphthalate		2.0	1.97	ug/L	99	(70-130)		
LCS2	Dimethylphthalate		2.0	1.93	ug/L	97	(70-130)	20	2.0
MBLK	Dimethylphthalate			<0.15	ug/L				
MRLHI	Dimethylphthalate		0.3	0.303	ug/L	101	(50-150)		
MS_200912160001	Dimethylphthalate		2.0	1.86	ug/L	93	(70-130)		
LCS1	Endosulfan I (Alpha)		2.0	1.88	ug/L	94	(70-130)		
LCS2	Endosulfan I (Alpha)		2.0	1.87	ug/L	93	(70-130)	20	0.53
MBLK	Endosulfan I (Alpha)			<0.05	ug/L				
MRLHI	Endosulfan I (Alpha)		0.1	0.0790	ug/L	79	(50-150)		
MS_200912160001	Endosulfan I (Alpha)		2.0	1.81	ug/L	90	(70-130)		
LCS1	Endosulfan II (Beta)		2.0	1.91	ug/L	96	(70-130)		
LCS2	Endosulfan II (Beta)		2.0	1.88	ug/L	94	(70-130)	20	1.6
MBLK	Endosulfan II (Beta)			<0.05	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Endosulfan II (Beta)		0.1	0.102	ug/L	102	(50-150)		
MS_200912160001	Endosulfan II (Beta)		2.0	1.77	ug/L	89	(70-130)		
LCS1	Endosulfan Sulfate		2.0	1.9	ug/L	95	(70-130)		
LCS2	Endosulfan Sulfate		2.0	1.91	ug/L	96	(70-130)	20	0.53
MBLK	Endosulfan Sulfate			<0.05	ug/L				
MRLHI	Endosulfan Sulfate		0.1	0.111	ug/L	111	(50-150)		
MS_200912160001	Endosulfan Sulfate		2.0	1.87	ug/L	94	(70-130)		
LCS1	Endrin		2.0	1.83	ug/L	92	(70-130)		
LCS2	Endrin		2.0	1.83	ug/L	92	(70-130)	20	0.0
MBLK	Endrin			<0.05	ug/L				
MRLHI	Endrin		0.1	0.103	ug/L	103	(50-150)		
MS_200912160001	Endrin		2.0	1.81	ug/L	91	(70-130)		
LCS1	Endrin Aldehyde		2.0	1.78	ug/L	89	(70-130)		
LCS2	Endrin Aldehyde		2.0	1.76	ug/L	88	(70-130)	20	1.1
MBLK	Endrin Aldehyde			<0.05	ug/L				
MRLHI	Endrin Aldehyde		0.1	0.109	ug/L	109	(50-150)		
MS_200912160001	Endrin Aldehyde		2.0	1.53	ug/L	77	(70-130)		
LCS1	EPTC		2.0	1.87	ug/L	94	(70-130)		
LCS2	EPTC		2.0	1.87	ug/L	94	(70-130)	20	0.0
MBLK	EPTC			<0.05	ug/L				
MRLHI	EPTC		0.1	0.0870	ug/L	87	(50-150)		
MS_200912160001	EPTC		2.0	1.77	ug/L	89	(70-130)		
LCS1	Fluoranthene		2.0	1.9	ug/L	95	(70-130)		
LCS2	Fluoranthene		2.0	1.89	ug/L	95	(70-130)	20	0.53
MBLK	Fluoranthene			<0.05	ug/L				
MRLHI	Fluoranthene		0.1	0.0920	ug/L	92	(50-150)		
MS_200912160001	Fluoranthene		2.0	1.85	ug/L	93	(70-130)		
LCS1	Fluorene		2.0	1.99	ug/L	99	(70-130)		
LCS2	Fluorene		2.0	1.94	ug/L	97	(70-130)	20	2.5
MBLK	Fluorene			<0.05	ug/L				
MRLHI	Fluorene		0.1	0.103	ug/L	103	(50-150)		
MRLMD	Fluorene		0.05	0.0530	ug/L	106	(50-150)		
MS_200912160001	Fluorene		2.0	1.88	ug/L	94	(70-130)		
LCS1	gamma-Chlordane		2.0	1.83	ug/L	92	(70-130)		
LCS2	gamma-Chlordane		2.0	1.82	ug/L	91	(70-130)	20	0.55
MBLK	gamma-Chlordane			<0.025	ug/L				
MRLHI	gamma-Chlordane		0.1	0.0960	ug/L	96	(50-150)		
MRLMD	gamma-Chlordane		0.05	0.0530	ug/L	106	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200912160001	gamma-Chlordane		2.0	1.8	ug/L	90	(70-130)		
LCS1	Heptachlor		2.0	1.8	ug/L	90	(70-130)		
LCS2	Heptachlor		2.0	1.79	ug/L	90	(70-130)	20	0.56
MBLK	Heptachlor			<0.015	ug/L				
MRLHI	Heptachlor		0.1	0.0910	ug/L	91	(50-150)		
MRLLW	Heptachlor		0.02	0.0220	ug/L	110	(50-150)		
MRLMD	Heptachlor		0.05	0.0490	ug/L	98	(50-150)		
MS_200912160001	Heptachlor		2.0	1.72	ug/L	86	(70-130)		
LCS1	Heptachlor Epoxide (isomer B)		2.0	1.84	ug/L	92	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2.0	1.89	ug/L	95	(70-130)	20	2.7
MBLK	Heptachlor Epoxide (isomer B)			<0.025	ug/L				
MRLHI	Heptachlor Epoxide (isomer B)		0.1	0.0940	ug/L	94	(50-150)		
MRLMD	Heptachlor Epoxide (isomer B)		0.05	0.0470	ug/L	94	(50-150)		
MS_200912160001	Heptachlor Epoxide (isomer B)		2.0	1.83	ug/L	92	(70-130)		
LCS1	Hexachlorobenzene		2.0	1.93	ug/L	97	(70-130)		
LCS2	Hexachlorobenzene		2.0	1.89	ug/L	94	(70-130)	20	2.1
MBLK	Hexachlorobenzene			<0.025	ug/L				
MRLHI	Hexachlorobenzene		0.3	0.294	ug/L	98	(50-150)		
MRLLW	Hexachlorobenzene		0.06	0.0620	ug/L	103	(50-150)		
MRLMD	Hexachlorobenzene		0.15	0.151	ug/L	101	(50-150)		
MS_200912160001	Hexachlorobenzene	ND	2.0	1.82	ug/L	91	(70-130)		
LCS1	Hexachlorocyclopentadiene		2.0	1.77	ug/L	89	(70-130)		
LCS2	Hexachlorocyclopentadiene		2.0	1.8	ug/L	90	(70-130)	20	1.7
MBLK	Hexachlorocyclopentadiene			<0.025	ug/L				
MRLHI	Hexachlorocyclopentadiene		0.3	0.219	ug/L	73	(50-150)		
MRLLW	Hexachlorocyclopentadiene		0.06	0.0510	ug/L	85	(50-150)		
MRLMD	Hexachlorocyclopentadiene		0.15	0.140	ug/L	93	(50-150)		
MS_200912160001	Hexachlorocyclopentadiene	ND	2.0	1.79	ug/L	90	(70-130)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2.0	1.83	ug/L	91	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2.0	1.88	ug/L	94	(70-130)	20	2.7
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.025	ug/L				
MRLHI	Indeno(1,2,3,c,d)Pyrene		0.1	0.0900	ug/L	90	(50-150)		
MRLMD	Indeno(1,2,3,c,d)Pyrene		0.05	0.0510	ug/L	102	(50-150)		
MS_200912160001	Indeno(1,2,3,c,d)Pyrene		2.0	1.77	ug/L	89	(70-130)		
LCS1	Isophorone		2.0	1.77	ug/L	89	(70-130)		
LCS2	Isophorone		2.0	1.84	ug/L	92	(70-130)	20	3.9
MBLK	Isophorone			<0.25	ug/L				
MRLHI	Isophorone		0.1	0.0930	ug/L	93	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_200912160001	Isophorone		2.0	1.7	ug/L	85	(70-130)		
LCS1	Lindane		2.0	2.00	ug/L	100	(70-130)		
LCS2	Lindane		2.0	1.94	ug/L	97	(70-130)	20	3.0
MBLK	Lindane			<0.02	ug/L				
MRLHI	Lindane		0.1	0.112	ug/L	112	(50-150)		
MRLLW	Lindane		0.02	0.0230	ug/L	115	(50-150)		
MRLMD	Lindane		0.05	0.0520	ug/L	104	(50-150)		
MS_200912160001	Lindane		2.0	1.88	ug/L	94	(70-130)		
LCS1	Malathion		2.0	2.03	ug/L	101	(70-130)		
LCS2	Malathion		2.0	1.98	ug/L	99	(70-130)	20	2.5
MBLK	Malathion			<0.05	ug/L				
MRLHI	Malathion		0.1	0.0990	ug/L	99	(50-150)		
MS_200912160001	Malathion		2.0	1.99	ug/L	100	(70-130)		
LCS1	Methoxychlor		2.0	2.15	ug/L	108	(70-130)		
LCS2	Methoxychlor		2.0	2.17	ug/L	108	(70-130)	20	0.93
MBLK	Methoxychlor			<0.05	ug/L				
MRLHI	Methoxychlor		0.1	0.0970	ug/L	97	(50-150)		
MS_200912160001	Methoxychlor		2.0	2.18	ug/L	109	(70-130)		
LCS1	Metolachlor		2.0	1.97	ug/L	98	(70-130)		
LCS2	Metolachlor		2.0	1.95	ug/L	98	(70-130)	20	1.0
MBLK	Metolachlor			<0.025	ug/L				
MRLHI	Metolachlor		0.1	0.0980	ug/L	98	(50-150)		
MRLMD	Metolachlor		0.05	0.0480	ug/L	96	(50-150)		
MS_200912160001	Metolachlor		2.0	1.88	ug/L	94	(70-130)		
LCS1	Metribuzin		2.0	1.96	ug/L	98	(70-130)		
LCS2	Metribuzin		2.0	1.91	ug/L	96	(70-130)	20	2.6
MBLK	Metribuzin			<0.05	ug/L				
MRLHI	Metribuzin		0.1	0.0970	ug/L	97	(50-150)		
MRLMD	Metribuzin		0.05	0.0510	ug/L	102	(50-150)		
MS_200912160001	Metribuzin		2.0	1.88	ug/L	94	(70-130)		
LCS1	Molinate		2.0	1.99	ug/L	100	(70-130)		
LCS2	Molinate		2.0	1.96	ug/L	98	(70-130)	20	1.5
MBLK	Molinate			<0.05	ug/L				
MRLHI	Molinate		0.1	0.101	ug/L	101	(50-150)		
MS_200912160001	Molinate	ND	2.0	1.89	ug/L	95	(70-130)		
LCS1	Naphthalene		2.0	1.81	ug/L	90	(70-130)		
LCS2	Naphthalene		2.0	1.91	ug/L	96	(70-130)	20	5.4
MBLK	Naphthalene			<0.05	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Naphthalene		0.1	0.113	ug/L	113	(50-150)		
MS_200912160001	Naphthalene		2.0	1.8	ug/L	90	(70-130)		
LCS1	Parathion		2.0	1.92	ug/L	96	(70-130)		
LCS2	Parathion		2.0	1.87	ug/L	93	(70-130)	20	2.6
MBLK	Parathion			<0.05	ug/L				
MRLHI	Parathion		0.1	0.108	ug/L	108	(50-150)		
MS_200912160001	Parathion		2.0	1.89	ug/L	94	(70-130)		
LCS1	Pendimethalin		2.0	1.73	ug/L	87	(70-130)		
LCS2	Pendimethalin		2.0	1.79	ug/L	90	(70-130)	20	3.4
MBLK	Pendimethalin			<0.05	ug/L				
MRLHI	Pendimethalin		0.1	0.109	ug/L	109	(50-150)		
MS_200912160001	Pendimethalin		2.0	1.75	ug/L	87	(70-130)		
LCS1	Pentachlorophenol		8.0	8.2	ug/L	102	(70-130)		
LCS2	Pentachlorophenol		8.0	7.99	ug/L	100	(70-130)	20	2.6
MBLK	Pentachlorophenol			<0.6	ug/L				
MRLHI	Pentachlorophenol		1.2	1.28	ug/L	107	(50-150)		
MS_200912160001	Pentachlorophenol		8.0	8.58	ug/L	107	(70-130)		
LCS1	Permethrin (mixed isomers)		4.0	3.78	ug/L	95	(70-130)		
LCS2	Permethrin (mixed isomers)		4.0	3.81	ug/L	95	(70-130)	20	0.79
MBLK	Permethrin (mixed isomers)			<0.1	ug/L				
MRLHI	Permethrin (mixed isomers)		0.2	0.203	ug/L	102	(50-150)		
MS_200912160001	Permethrin (mixed isomers)		4.0	3.78	ug/L	94	(70-130)		
LCS1	Perylene-d12 (S)			89.7	%	90	(70-130)		
LCS2	Perylene-d12 (S)			89.0	%	89	(70-130)		
MBLK	Perylene-d12 (S)			79.7	%	80	(70-130)		
MRLHI	Perylene-d12 (S)			87.8	%	88	(70-130)		
MRLLW	Perylene-d12 (S)			80.8	%	81	(70-130)		
MRLMD	Perylene-d12 (S)			84.0	%	84	(70-130)		
MS_200912160001	Perylene-d12 (S)			85.2	%	85	(70-130)		
LCS1	Phenanthrene		2.0	1.78	ug/L	89	(70-130)		
LCS2	Phenanthrene		2.0	1.77	ug/L	89	(70-130)	20	1.1
MBLK	Phenanthrene			<0.02	ug/L				
MRLHI	Phenanthrene		0.1	0.0960	ug/L	96	(50-150)		
MRLLW	Phenanthrene		0.02	0.0210	ug/L	105	(50-150)		
MRLMD	Phenanthrene		0.05	0.0540	ug/L	108	(50-150)		
MS_200912160001	Phenanthrene		2.0	1.72	ug/L	86	(70-130)		
LCS1	Phenanthrene-d10 (I)			86.6	%	87	(50-150)		
LCS2	Phenanthrene-d10 (I)			81.6	%	82	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates
are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Phenanthrene-d10 (I)			94.5	%	95	(50-150)		
MRLHI	Phenanthrene-d10 (I)			88.7	%	89	(50-150)		
MRLLW	Phenanthrene-d10 (I)			91.4	%	91	(50-150)		
MRLMD	Phenanthrene-d10 (I)			96.6	%	97	(50-150)		
MS_200912160001	Phenanthrene-d10 (I)			92.3	%	92	(50-150)		
LCS1	Propachlor		2.0	1.92	ug/L	96	(70-130)		
LCS2	Propachlor		2.0	1.9	ug/L	95	(70-130)	20	1.1
MBLK	Propachlor			<0.025	ug/L				
MRLHI	Propachlor		0.1	0.130	ug/L	130	(50-150)		
MRLMD	Propachlor		0.05	0.0640	ug/L	128	(50-150)		
MS_200912160001	Propachlor		2.0	1.86	ug/L	93	(70-130)		
LCS1	Pyrene		2.0	1.94	ug/L	97	(70-130)		
LCS2	Pyrene		2.0	1.9	ug/L	95	(70-130)	20	2.1
MBLK	Pyrene			<0.025	ug/L				
MRLHI	Pyrene		0.1	0.0940	ug/L	94	(50-150)		
MRLMD	Pyrene		0.05	0.0480	ug/L	96	(50-150)		
MS_200912160001	Pyrene		2.0	1.88	ug/L	94	(70-130)		
LCS1	Simazine		2.0	1.95	ug/L	98	(70-130)		
LCS2	Simazine		2.0	1.94	ug/L	97	(70-130)	20	0.51
MBLK	Simazine			<0.025	ug/L				
MRLHI	Simazine		0.1	0.119	ug/L	119	(50-150)		
MRLMD	Simazine		0.05	0.0660	ug/L	132	(50-150)		
MS_200912160001	Simazine	ND	2.0	1.87	ug/L	93	(70-130)		
LCS1	Terbacil		2.0	1.85	ug/L	93	(70-130)		
LCS2	Terbacil		2.0	1.7	ug/L	85	(70-130)	20	8.4
MBLK	Terbacil			<0.05	ug/L				
MRLHI	Terbacil		0.1	0.0930	ug/L	93	(50-150)		
MS_200912160001	Terbacil		2.0	1.81	ug/L	91	(70-130)		
LCS1	Terbuthylazine		2.0	2.08	ug/L	104	(70-130)		
LCS2	Terbuthylazine		2.0	2.06	ug/L	103	(70-130)	20	0.97
MBLK	Terbuthylazine			<0.2	ug/L				
MRLHI	Terbuthylazine		0.1	0.102	ug/L	102	(50-150)		
MS_200912160001	Terbuthylazine		2.0	1.94	ug/L	97	(70-130)		
LCS1	Thiobencarb		2.0	1.98	ug/L	99	(70-130)		
LCS2	Thiobencarb		2.0	1.95	ug/L	98	(70-130)	20	1.5
MBLK	Thiobencarb			<0.1	ug/L				
MRLHI	Thiobencarb		0.1	0.0950	ug/L	95	(50-150)		
MS_200912160001	Thiobencarb	ND	2.0	1.93	ug/L	96	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	trans-Nonachlor		2.0	1.77	ug/L	89	(70-130)		
LCS2	trans-Nonachlor		2.0	1.82	ug/L	91	(70-130)	20	2.2
MBLK	trans-Nonachlor			<0.025	ug/L				
MRLHI	trans-Nonachlor		0.1	0.101	ug/L	101	(50-150)		
MRLMD	trans-Nonachlor		0.05	0.0470	ug/L	94	(50-150)		
MS_200912160001	trans-Nonachlor		2.0	1.79	ug/L	90	(70-130)		
LCS1	Trifluralin		2.0	1.82	ug/L	91	(70-130)		
LCS2	Trifluralin		2.0	1.92	ug/L	96	(70-130)	20	5.3
MBLK	Trifluralin			<0.05	ug/L				
MRLHI	Trifluralin		0.1	0.113	ug/L	113	(50-150)		
MS_200912160001	Trifluralin		2.0	1.86	ug/L	93	(70-130)		
LCS1	Triphenylphosphate (S)			99.9	%	100	(70-130)		
LCS2	Triphenylphosphate (S)			102	%	102	(70-130)		
MBLK	Triphenylphosphate (S)			98.2	%	98	(70-130)		
MRLHI	Triphenylphosphate (S)			97.9	%	98	(70-130)		
MRLLW	Triphenylphosphate (S)			100	%	100	(70-130)		
MRLMD	Triphenylphosphate (S)			100	%	100	(70-130)		
MS_200912160001	Triphenylphosphate (S)			104	%	104	(70-130)		

QC Ref# 535778 - NTA and EDTA by Ion Chromatography by MWH_MET **Analysis Date: 12/19/2009**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	EDTA		0.5	0.472	mg/L	95	(80-120)		
LCS2	EDTA		0.5	0.478	mg/L	96	(80-120)	20	1.3
MBLK	EDTA			<0.1	mg/L				
MRL_CHK	EDTA		0.1	0.0991	mg/L	99	(50-150)		
MS_200912170065	EDTA	ND	0.5	0.504	mg/L	101	(80-120)		
MSD_200912170065	EDTA	ND	0.5	0.508	mg/L	102	(80-120)	20	0.99
LCS1	NTA		0.2	0.204	mg/L	102	(80-120)		
LCS2	NTA		0.2	0.203	mg/L	102	(80-120)	20	0.49
MBLK	NTA			<0.1	mg/L				
MRL_CHK	NTA		0.1	0.102	mg/L	102	(50-150)		
MS_200912170065	NTA	ND	0.2	0.201	mg/L	100	(80-120)		
MSD_200912170065	NTA	ND	0.2	0.213	mg/L	106	(80-120)	20	5.8

QC Ref# 536396 - Nitrosamines by GCMS by EPA 521 **Analysis Date: 01/01/2010**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
CCCH	N-Nitroso dimethylamine (NDMA)		100	76.3	ng/l	76	(70-130)		
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	2.13	ng/l	107	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	38.1	ng/l	95	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	1.65	ng/L	82	(50-150)		
CCCH	NDMA-D6 (S)			96.5	%	97	(70-130)		
CCCL	NDMA-D6 (S)			105	%	105	(70-130)		
CCCM	NDMA-D6 (S)			99.7	%	100	(70-130)		
MBLK	NDMA-D6 (S)			88.0	%	88	(70-130)		
MRL_CHK	NDMA-D6 (S)			76.9	%	77	(70-130)		

QC Ref# 536641 - Nitrosamines by GCMS by EPA 521 **Analysis Date: 01/02/2010**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
CCCL	N-Nitroso dimethylamine (NDMA)		2.0	1.97	ng/l	98	(50-150)		
CCCM	N-Nitroso dimethylamine (NDMA)		40	47.9	ng/l	120	(70-130)		
LCS3	N-Nitroso dimethylamine (NDMA)		80	63.0	ng/L	79	(70-130)		
LCS4	N-Nitroso dimethylamine (NDMA)		80	60.3	ng/L	75	(70-130)	30	4.4
MS2_200912150343	N-Nitroso dimethylamine (NDMA)	ND	40	32.9	ng/L	81	(70-130)		
MSD2_200912150343	N-Nitroso dimethylamine (NDMA)	ND	40	31.7	ng/l	78	(70-130)	30	3.8
CCCL	NDMA-D6 (S)			100	%	100	(70-130)		
CCCM	NDMA-D6 (S)			106	%	106	(70-130)		
LCS3	NDMA-D6 (S)			79.5	%	80	(70-130)		
LCS4	NDMA-D6 (S)			77.3	%	77	(70-130)		
MS2_200912150343	NDMA-D6 (S)			82.4	%	82	(70-130)		
MSD2_200912150343	NDMA-D6 (S)			81.0	%	81	(70-130)		

QC Ref# 538353 - Perfluorinated compounds by MWH PFC **Analysis Date: 01/07/2010**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Perfluoro butanoic acid- PFBA		50	37.6	ng/L	75	(70-130)		
LCS2	Perfluoro butanoic acid- PFBA		50	35.8	ng/L	72	(70-130)	20	4.9
MBLK	Perfluoro butanoic acid- PFBA			<10	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		5.0	6.05	ng/L	121	(50-150)		
MS_201001270077	Perfluoro butanoic acid- PFBA	ND	50	31.2	ng/l	**62**	(70-130)		
MSD_201001270077	Perfluoro butanoic acid- PFBA	ND	50	32.7	ng/l	**65**	(70-130)	30	4.7
LCS1	Perfluoro octanesulfonate-PFOS		50	49.7	ng/L	99	(70-130)		
LCS2	Perfluoro octanesulfonate-PFOS		50	47.6	ng/L	95	(70-130)	20	4.3
MBLK	Perfluoro octanesulfonate-PFOS			<5	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		5.0	4.04	ng/L	81	(50-150)		
MS_201001270077	Perfluoro octanesulfonate-PFOS	ND	50	40.3	ng/l	81	(70-130)		
MSD_201001270077	Perfluoro octanesulfonate-PFOS	ND	50	46.9	ng/l	94	(70-130)	30	15
LCS1	Perfluoro octanoic acid - PFOA		50	42.1	ng/L	84	(70-130)		
LCS2	Perfluoro octanoic acid - PFOA		50	44.9	ng/L	90	(70-130)	20	6.4
MBLK	Perfluoro octanoic acid - PFOA			<5	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	4.41	ng/L	88	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_201001270077	Perfluoro octanoic acid - PFOA	ND	50	48.4	ng/l	97	(70-130)		
MSD_201001270077	Perfluoro octanoic acid - PFOA	ND	50	40.5	ng/l	81	(70-130)	30	18
LCS1	PFBA-C13 (I)			101	%	101	(50-150)		
LCS2	PFBA-C13 (I)			102	%	102	(50-150)		
MBLK	PFBA-C13 (I)			103	%	103	(50-150)		
MRL_CHK	PFBA-C13 (I)			102	%	102	(50-150)		
MS_201001270077	PFBA-C13 (I)			106	%	106	(25-180)		
MSD_201001270077	PFBA-C13 (I)			106	%	106	(25-180)		
LCS1	PFOA-C13 (I)			96.5	%	97	(50-150)		
LCS2	PFOA-C13 (I)			97.4	%	97	(50-150)		
MBLK	PFOA-C13 (I)			94.7	%	95	(50-150)		
MRL_CHK	PFOA-C13 (I)			96.9	%	97	(50-150)		
MS_201001270077	PFOA-C13 (I)			97.8	%	98	(25-180)		
MSD_201001270077	PFOA-C13 (I)			101	%	101	(25-180)		
LCS1	PFOS-C13 (I)			93.9	%	94	(50-150)		
LCS2	PFOS-C13 (I)			97.0	%	97	(50-150)		
MBLK	PFOS-C13 (I)			102	%	102	(50-150)		
MRL_CHK	PFOS-C13 (I)			106	%	106	(50-150)		
MS_201001270077	PFOS-C13 (I)			106	%	106	(25-180)		
MSD_201001270077	PFOS-C13 (I)			105	%	105	(25-180)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

LABORATORY SERVICES
Santa Clara Valley Water District

Certificate of Analysis

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

12/15/2009

Henry Barrientos
Groundwater Management Unit
Water Supply Management Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Henry Barrientos,

This transmits the analytical results for the Laboratory services that you requested. The data contained herein are supported by the Laboratory Services Unit's Quality Assurance/Quality Control Program.

The analytical results, quality control information, and sample handling observations have been reviewed for both completeness and accuracy, with any exceptions noted.

Laboratory Analyst(s)

James N. Scott
Laboratory Manager

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14583

PROJECT NAME Reclaimed Water

PROJECT NUMBER 27011-07-4200

RECORDER

SAMPLERS Henry Castro Jr (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D. Plastic ~~Liter~~ 250 ml]
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
1. Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO₃	HCL	Field Filtered (check)	ANALYSIS REQUESTED Bromide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES SCWD lab#	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	12-14-09	0920	08S02E08D012		MW-1		D	A	1				X	1		✓		040		
2		1045	08S02E08D011		MW-2		D	A	1				X	1		✓		041		
3		1230	08S02E07A014		MW-3		D	A	1				X	1		✓		042		
4		1145	08S02E07A015		MW-4		D	A	1				X	1		✓		043		
5			~~L5 comp~~				~~D~~	~~A~~	~~1~~					1		✓		044		
6		COMP	L10 comp				D	A	1				X	1		✓		045		
7	✓	0930	Source				D	A	1				X	1		✓		046		
8																				
9																				
10																				
11																				
12																				
13																				
14																				
15																				
16																				

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	None		12/14/09	1250		12/14/09	1250

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below)

Verbals Requested: Yes ☒ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

Certificate of Analysis - Analytical Report

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

Lab No. 200912140410

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**MW-1**	**Unknown**	**91041015-0000**	**12/14/2009**	**9:20**	**Thomas M.**

Batch: 59160

Prep Date:	Analysis Date: 12/14/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.24	mg/L		

Lab No. 200912140411

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**MW-2**	**Unknown**	**91041015-0000**	**12/14/2009**	**10:45**	**Thomas M.**

Batch: 59160

Prep Date:	Analysis Date: 12/14/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.13	mg/L		

Lab No. 200912140412

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**MW-3**	**Unknown**	**91041015-0000**	**12/14/2009**	**12:30**	**Thomas M.**

Batch: 59160

Prep Date:	Analysis Date: 12/14/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.26	mg/L		

Lab No. 200912140413

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**MW-4**	**Unknown**	**91041015-0000**	**12/14/2009**	**11:45**	**Thomas M.**

Batch: 59160

Prep Date:	Analysis Date: 12/14/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.21	mg/L		

Lab No. 200912140414

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**L10 COMP**	**Unknown**	**91041015-0000**	**12/14/2009**		**Thomas M.**

Batch: 59160

Prep Date:	Analysis Date: 12/14/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.30	mg/L		

Lab No. 200912140415

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**SOURCE**	**Unknown**	**91041015-0000**	**12/14/2009**	**9:30**	**Thomas M.**

Batch: 59160

Prep Date:	Analysis Date: 12/14/2009	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.32	mg/L		

Certificate of Analysis - Analytical Report

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

Legend:

DLR = Detection Limit For Reporting
ND = Not Detected At Or Above The DLR
NT = Not Tested
NR = Not Reported

ABS = Centimeters $^{-1}$
Cells/ml = Cells Per Milliliter
CFU/100 ml = Colony Forming Units Per 100 Milliliters
CFU/ml = Colony Forming Units Per Milliliter
cysts/L = Cysts Per Liter
Deg. C = Degrees Centigrade
mg/L = Milligrams Per Liter
MPN/100ml = Most Probable Number Per 100 Milliliters
ng/L = Nanograms Per Liter

NTU = Nephelometric Turbidity Units
oocysts/L = Oocysts Per Liter
P/A 100ml = Presence/Absence Per 100 Milliliters
pCi/L = Picocuries Per Liter
Rhod-Eqiv = Rhodamine Equivalents
T.O.N. = Threshold Odor Number
ug C/L = Micrograms Carbon Per Liter
ug/L = Micrograms Per Liter
umhos= Microhms

Data Qualifier Definitions:

Certificate of Analysis - QC Report

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

Batch: 59160

QC Code	Test Name		Reported Value	Units	Flag		Acceptance Range	RPD	Flag	RPD Limit
LFB	Bromide	Spike Amount: 1	1.08	mg/L		%Rec: 108.2	90 - 110			
LFM	Bromide	Spike Amount: 1	1.34	mg/L		%Rec: 101.8	90 - 110			
LFM D	Bromide	Spike Amount: 1	1.34	mg/L		%Rec: 101.9	90 - 110	0.1		15
QCS R	Bromide	1	1.10	mg/L		%Rec: 110	90 - 110			
LFB	Phosphate	Spike Amount: 2	2.00	mg/L		%Rec: 100	90 - 110			
LFM	Phosphate	Spike Amount: 1	2.16	mg/L		%Rec: 97.1	90 - 110			
LFM D	Phosphate	Spike Amount: 1	2.17	mg/L		%Rec: 97.8	90 - 110	0.3		15
QCS R	Phosphate	3	3.11	mg/L		%Rec: 103.7	90 - 110			

Report Notes:

QCS, spike recovery, and RPD values that are outside of established limits are underlined.

If an LFM recovery exceeds the established limits for any analyte, and the laboratory performance for other QC parameters is shown to be in control for that analyte, then failure is not system related but due to matrix interferences and is labeled as suspect.

Reported values that are flagged "H" are above the established acceptance range; reported values that are flagged "L" are below the acceptance range. RPD results flagged "H" are above the established RPD limit.-

Quality control sample (LFB, LFM, LFM D, QCS, QCS R, and Surrogate) reporting frequency is based on the method requirement (e.g., a QCS may not be run with every batch).

Legend:

LFB = Laboratory Fortified Blank: An aliquot of a Laboratroty Reagent Blank (LRB) to which known quantities of the method analytes are added in the laboratory. The LFB is analyzed exactly like a sample.

LFB D = Laboratory Fortified Blank Duplicate: A duplicate aliquot of an LRB to which known quantities of the method analytes are added in the laboratory. The LFB D is analyzed exactly like a sample.

LFM = Laboratory Fortified Matrix: An aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM is analyzed exactly like a sample.

LFM D = Laboratory Fortified Matrix Duplicate: A duplicate aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM D is analyzed exactly like a sample.

QCS = Quality Control Sample: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified concentration range.

QCS R = Quality Control Sample Recovery: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS R is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified recovery range.

RPD = Relative Percent Difference

SUR = Surrogate. An organic compound that is similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis.

MWH
LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
02/08/2010
Yolanda Martin
MWH LABORATORIES

YOM: Yolanda.O.Martin

Project Manager

ACCREDITED IN ACCORDANCE WITH
nelac
01114CA

Report#: 322967
Project:
RECYCLED-WATER-STUDY
Group: Chemistry
PO#: B30-12470

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH Laboratories
750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 322967
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Yolanda.O.Martin
Phone: 626-386-1104
PO #: B30-12470

The following samples were received from you on **January 07, 2010**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Sample Date
201001070139	L-5 Composite	05-Jan-2010 00:00
	@PFC	

Test Description

@PFC -- Perfluorinated compounds

MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

322967

ENTERED
1/7/10
Jane

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY:

LOGIN COMMENTS: ______

SAMPLES CHECKED AGAINST COC BY: JMH

SAMPLES LOGGED IN BY: JMH

SAMPLE TEMP WHEN REC'D AT LAB: 4 °c (Compliance: 6°C or Below)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

CONDITION OF BLUE ICE: FROZEN X PARTIALLY FROZEN ___ THAWED ___ (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: LOCUS TECHNOLOGIES

SYSTEM #: 27011-07-7000

COMPLIANCE SAMPLES ☐ - Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐ (check for yes)

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE:

P.O.# / JOB # / PROJECT :

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE: T. MURPHY T. Murphy

TAT requested: rush by adv notice only

STD ✓ 1 week ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	PFC's	SAMPLER COMMENTS
1/5/10	COMP	L5 COMP	L5COMP	RGW		✓	X	
	3/9							

* MATRIX TYPES:

RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:	Tom Murphy	TOM MURPHY	LOCUS TECHNOLOGIES	1/6/10	1255
RECEIVED BY:	Jane Herring	Jane Herring	MWH	1/7/10	12:55
RELINQUISHED BY:	Jane Herring	Jane Herring	MWH	1/7/10	16:04
RECEIVED BY:		M. DEMESA	MWH	1-8-10	0743
RELINQUISHED BY:					
RECEIVED BY:					

Page 1

C-O-C# ______

PAGE ____ OF ____

OnTrac
On Time Delivery For Less
800.334.5000
ontrac.com

D10010254351467

Date Printed 1/7/2010

Tracking#D10010254351467

Shipped From:
MWH Laboratories
910 Riverside Parkway 30
West Sacramento, CA 95605

Sent By: RITA REEVES
Phone#: (916)374-8030
wgt(lbs): 15
Reference:

Ship To Company: **MWH LABS SAMPLE RECEIVING** **750 ROYAL OAKS DRIVE 100** **MONROVIA, CA 91016** **ANDORA EFFENDI (626)386-1092**	*Service:* **G** *Sort Code:* **COM** *Special Services:* **Signature Required**

4/9

MWH
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750 Royal Oak Dr., Suite 100
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Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 322967

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
01/07/2010

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201001070139	**L-5 Composite**				
02/01/2010 07:57	Perfluoro octanesulfonate-PFOS		9.0		ng/L	5

SUMMARY OF POSITIVE DATA ONLY

MWH
LABORATORIES
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750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 322967

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
01/07/2010

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
L-5 Composite (201001070139)					**Sampled on 01/05/2010 00:00**			
			MWH PFC - Perfluorinated compounds					
02/01/2010	07:57	540069	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	20	1
02/01/2010	07:57	540069	(MWH PFC)	Perfluoro octanesulfonate-PFOS	9.0	ng/L	5	1
02/01/2010	07:57	540069	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
02/01/2010	07:57	540069	(MWH PFC)	PFBA-C13	108	%		1
02/01/2010	07:57	540069	(MWH PFC)	PFOA-C13	103	%		1
02/01/2010	07:57	540069	(MWH PFC)	PFOS-C13	76	%		1

MWH LABORATORIES
A Division of MWH Americas, Inc.

750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory Comments
Report: #322967

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

The Comments Report may be blank if there are no comments for this report.

QC Ref # 540069 - Perfluorinated compounds **Analysis Date: 02/01/2010**

201001070139 L-5 Composite Analyzed by: LHZ

Laboratory
QC Report: 322967

Locus Technologies

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
QC Ref# 540069 - Perfluorinated compounds by MWH PFC						**Analysis Date: 02/01/2010**			
LCS1	Perfluoro butanoic acid- PFBA		25	24.2	ng/L	97	(70-130)		
LCS2	Perfluoro butanoic acid- PFBA		25	24.1	ng/L	96	(70-130)	20	0.41
MBLK	Perfluoro butanoic acid- PFBA			<20	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		5.0	4.66	ng/L	93	(50-150)		
MS_201002010245	Perfluoro butanoic acid- PFBA	ND	25	39.5	ng/l	118	(70-130)		
MSD_201002010245	Perfluoro butanoic acid- PFBA	ND	25	38.1	ng/l	112	(70-130)	30	5.2
LCS1	Perfluoro octanesulfonate-PFOS		25	25.6	ng/L	102	(70-130)		
LCS2	Perfluoro octanesulfonate-PFOS		25	28.6	ng/L	114	(70-130)	20	11
MBLK	Perfluoro octanesulfonate-PFOS			<5	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		5.0	5.66	ng/L	113	(50-150)		
MS_201002010245	Perfluoro octanesulfonate-PFOS	40	25	53.3	ng/l	**52**	(70-130)		
MSD_201002010245	Perfluoro octanesulfonate-PFOS	40	25	54.4	ng/l	**56**	(70-130)	30	8.1
LCS1	Perfluoro octanoic acid - PFOA		25	28.5	ng/L	114	(70-130)		
LCS2	Perfluoro octanoic acid - PFOA		25	23.7	ng/L	95	(70-130)	20	18
MBLK	Perfluoro octanoic acid - PFOA			<5	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	5.39	ng/L	108	(50-150)		
MS_201002010245	Perfluoro octanoic acid - PFOA	87	25	103	ng/l	**62**	(70-130)		
MSD_201002010245	Perfluoro octanoic acid - PFOA	87	25	96.3	ng/l	**36**	(70-130)	30	**55**
LCS1	PFBA-C13 (I)			105	%	105	(50-150)		
LCS2	PFBA-C13 (I)			98.2	%	98	(50-150)		
MBLK	PFBA-C13 (I)			99.0	%	99	(50-150)		
MRL_CHK	PFBA-C13 (I)			102	%	102	(50-150)		
MS_201002010245	PFBA-C13 (I)			116	%	116	(25-180)		
MSD_201002010245	PFBA-C13 (I)			113	%	113	(25-180)		
LCS1	PFOA-C13 (I)			92.9	%	93	(50-150)		
LCS2	PFOA-C13 (I)			92.5	%	93	(50-150)		
MBLK	PFOA-C13 (I)			97.8	%	98	(50-150)		
MRL_CHK	PFOA-C13 (I)			95.3	%	95	(50-150)		
MS_201002010245	PFOA-C13 (I)			104	%	104	(25-180)		
MSD_201002010245	PFOA-C13 (I)			106	%	106	(25-180)		
LCS1	PFOS-C13 (I)			102	%	102	(50-150)		
LCS2	PFOS-C13 (I)			84.2	%	84	(50-150)		
MBLK	PFOS-C13 (I)			111	%	111	(50-150)		
MRL_CHK	PFOS-C13 (I)			126	%	126	(50-150)		
MS_201002010245	PFOS-C13 (I)			79.2	%	79	(25-180)		
MSD_201002010245	PFOS-C13 (I)			84.9	%	85	(25-180)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

LABORATORY SERVICES
1026 Blossom Hill Road
San Jose, CA 95123-1193
Santa Clara Valley Water District

Certificate of Analysis

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

01/14/2010

Henry Barrientos
Groundwater Management Unit
Water Supply Management Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Henry Barrientos,

This transmits the analytical results for the Laboratory services that you requested. The data contained herein are supported by the Laboratory Services Unit's Quality Assurance/Quality Control Program.

The analytical results, quality control information, and sample handling observations have been reviewed for both completeness and accuracy, with any exceptions noted.

Laboratory Analyst(s)

James N. Scott
Laboratory Manager

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14594

PROJECT NAME SCVWD Reclaimed Water

PROJECT NUMBER 27011-4200

RECORDER T. Murphy (SIGN)

SAMPLERS T. MURPHY (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES		SAMPLE DESCRIPTION CODES		TAT CODES
A. 40-ml VOA Vial	E. Brass Tube	[✓ A.] Ground Water	F. Oil	[✓ 1.] Standard
B. Glass Liter	F. Other ____	B. Surface Water	G. Waste	2. 48 Hour
[✓ C.] Plastic 500-ml		C. Leachate	H. Blank/Spike	3. 24 Hour
D. Plastic Liter		D. Rinseate	I. Other ____	4. Other ____
		E. Soil/Sediment		

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO. ____

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO$_3$	HCL		Field Filtered (check)	ANALYSIS REQUESTED BROMIDE								TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES lab #	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	1/5/10	COMP	LS COMP ✓	—	—	—	C	A	1					X								1		✓		0180		
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												
16																												

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

t < 0°C slush

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature) T. Murphy	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	NONE	Thomas Murphy	1/5/10			1/5/10	1050

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760

☐ OTHER ____ TEL ____ FAX ____

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Certificate of Analysis - Analytical Report

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

Lab No. 201001060180

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**L5 COMP**	**Unknown**	**91041015-0000**	**01/05/2010**		**Thomas M.**

Batch: 59398

Prep Date:	Analysis Date: 01/06/2010	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.34	mg/L		

Legend:

DLR = Detection Limit For Reporting
ND = Not Detected At Or Above The DLR
NT = Not Tested
NR = Not Reported

ABS = Centimeters $^{-1}$
Cells/ml = Cells Per Milliliter
CFU/100 ml = Colony Forming Units Per 100 Milliliters
CFU/ml = Colony Forming Units Per Milliliter
cysts/L = Cysts Per Liter
Deg. C = Degrees Centigrade
mg/L = Milligrams Per Liter
MPN/100ml = Most Probable Number Per 100 Milliliters
ng/L = Nanograms Per Liter

NTU = Nephelometric Turbidity Units
oocysts/L = Oocysts Per Liter
P/A 100ml = Presence/Absence Per 100 Milliliters
pCi/L = Picocuries Per Liter
Rhod-Eqiv = Rhodamine Equivalents
T.O.N. = Threshold Odor Number
ug C/L = Micrograms Carbon Per Liter
ug/L = Micrograms Per Liter
umhos= Microhms

Data Qualifier Definitions:

Sample Event 8
3/1/2010

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878

Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878
2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 218531
ANALYTICAL REPORT

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

Project : 27011-07-4200
Location : Recycled Water Study
Level : II

Sample ID	Lab ID
MW-1	218531-001
MW-2	218531-002
MW-3	218531-003
MW-4	218531-004
SOURCE	218531-005
L5 COMP	218531-006
L10 COMP	218531-007
5042	218531-008
5043	218531-009

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: ______________________
Project Manager

Date: 03/23/2010

NELAP # 01107CA

CASE NARRATIVE

Laboratory number:	**218531**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**03/01/10**
Samples Received:	**03/01/10**

This data package contains sample and QC results for nine water samples, requested for the above referenced project on 03/01/10. The samples were received cold and intact.

Volatile Organics by GC/MS (EPA 8260B):
No analytical problems were encountered.

Metals (EPA 6010B):
No analytical problems were encountered.

Ion Chromatography (EPA 300.0):
No analytical problems were encountered.

Total Cyanide (SM4500CN-E):
No analytical problems were encountered.

Alkalinity (SM2320B):
No analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):
No analytical problems were encountered.

Total Phosphorous (SM4500P-E):
No analytical problems were encountered.

Total Organic Carbon (TOC) (SM5310C):
No analytical problems were encountered.

Dissolved Organic Carbon (DOC) (SM5310C):
No analytical problems were encountered.

Surfactants (MBAS) (SM5540C):
No analytical problems were encountered.

EPA 552 (EPA 552):
Columbia Analytical Services in Kelso, WA performed the analysis (NELAP certified). Please see the Columbia Analytical Services case narrative.

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14613

PROJECT NAME Recycled Water Study

SAMPLERS Henry Castro Jr. (PRINT)

(SIGN)

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A. 40-ml VOA Vial] 250 poly
[✓ B. Glass Liter]
[✓ C. Plastic 500-ml]
[✓ D. Plastic Liter]
[✓ E. ~~Brass Tube~~]
[✓ F. Other] 500ml 9/4

SAMPLE DESCRIPTION CODES
[✓ A. Ground Water]
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1. Standard]
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 218531

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED													LABORATORY USE ONLY		
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO3	HCL	H2SO4	Field Filtered (check)	See note 1	See note 2	TOC, DOC	TDS	8010/8020	HAA+Bromochloroacetic acid	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3-1-10	915	MW-1	15.8	847	6.65	D	A	1					X									1		✓				
2							C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							A	A			3							X					1		✓	✓			
6							B	A	1										X				1		✓				
7		↓	↓	↓	↓	↓	E	A				1								X			1		✓				
8		1020	MW-2	16.2	721	6.88	D	A	1					X									1		✓				
9							C	A		1					X								1		✓				
10							F	A				1				X							1		✓				
11							E	A	1								X						1		✓				
12							A	A			3							X					1		✓	✓			
13							B	A	1										X				1		✓				
14	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
15																													
16																													

NOTES / MISCELLANEOUS

1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.

2. Boron, Calcium, Magnesium, Sodium, Potasium

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	146-14, 15, 16, 17	Thomas Murphy	3/1/10	1430		3/1/10	1430

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below)

Verbals Requested: Yes ☒ No ☐

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14614

PROJECT NAME Recycled water Study
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 poly
[✓ F.] Other 500ml glass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 218531

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED															
	NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See note 1	See note 2	TOC DOC	TDS	8010/8020	See note 3	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
3	1	3-1-10	1205	MW-3	16.1	940	6.59	D	A	1					X									1		✓				
	2							C	A		1					X								1		✓				
	3							F	A				1				X							1		✓				
	4							E	A	1								X						1		✓				
	5							A	A			3							X					1		✓	✓			
	6							B	A	1										X				1		✓				
	7							E	A				1								X			1		✓				
4	8		1115	MW-4	16.0	850	6.79	D	A	1					X									1		✓				
	9							C	A		1					X								1		✓				
	10							F	A				1				X							1		✓				
	11							E	A	1								X						1		✓				
	12							A	A			3							X					1		✓	✓			
	13							B	A	1										X				1		✓				
	14							E	A				1								X			1		✓				
	15																													
	16																													

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.
3. HAA 6 full list + Bromochloroacetic acid.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time
Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	146-13, 15, 16, 17		3/1/10	1430		3/1/10	1430

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below)

Verbals Requested: Yes ☑ No ☐

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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14615

PROJECT NAME Recycled water Study

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLERS Henry Castro (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 poly
[✓ F.] Other 500 ml glass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY

LAB PROJECT NO. 218531

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HN0$_3$	HCL	H2SO4	~~Field Filtered (check)~~ NaOH	ANALYSIS REQUESTED: See note 1	See note 2	TOC DOC	TDS	ClO2/ClO3	See ~~note~~ note 3	Total Phosphate	Surfactants	Cyanide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3-1-10	915	SOURCE	13.9	1233	7.34	D	A	1					X									1		✓				
2	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
3							F	A				1				X							1		✓				
4							E	A	1								X						1		✓				
5							A	A			3							X					1		✓	✓			
6							B	A	1										X				1		✓				
7							E	A				1								X			1		✓				
8							D	A	1												X		1		✓				
9		↓	↓	↓	↓	↓	C	A					1									X	1		✓				
10	↓	—	Temp Blank	—	—	—	A	H	1															*	✓	N/A	*		
11																													
12																													
13																													
14																													
15																													
16																													

5

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.
3. HAA6 full list + Bromochloroacetic acid.

Field / Container Temp.
* Temp to be meas. & rec. upon receipt of samples at lab. 1.0 ~~3/1/10~~ 3/1/10 C. ~~1707 MV~~

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	146-13, 14, 16, 17	Thomas Murphy	3/1/10	1430		3/1/10	1430

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

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Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14616

PROJECT NAME Recycled Water Study
PROJECT NUMBER 27011-07-4200
RECORDER (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
B. Glass Liter
[✓ C.] Plastic 500-ml
D. Plastic Liter
[✓ E.] ~~Brass Tube~~ 250 Amber glass
[✓ F.] Other 250ml poly

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ________

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 218531

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	See note 1	See note 2	TOC	DOC	TDS	8010/8020	See note 3 M	Total Phosphate		TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
6	1	3-1-10	comp	L5 comp	16.2	2180	7.76	C	A	1					X									1		✓				
	2							F	A		1					X								1		✓				
	3							E	A				1				X							1		✓				
	4							E	A				1					X						1		✓				
	5							F	A	1									X					1		✓				
	6							A	A			2								X				1		✓	✓			
	7							E	A	1											X			1		✓				
	8			↓	↓	↓	↓	F	A				1									X		1		✓				
7	9			L10 comp	15.1	1689	7.10	C	A	1					X									1		✓				
	10							F	A		1					X								1		✓				
	11							E	A				1				X							1		✓				
	12							E	A				1					X						1		✓				
	13							F	A	1									X					1		✓				
	14							A	A			2								X				1		✓	✓			
	15							E	A	1											X			1		✓				
	16	↓	↓	↓	↓	↓	↓	F	A				1									X		1		✓				

NOTES / MISCELLANEOUS
1. Alkalinity, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.
3. HAA6 full list + Bromochloroacetic acid.

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☒ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	146-13, 14, 15, 17	Thomas Murphy	3/1/10	1430		3/1/10	1430

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
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☐ OTHER ____________ TEL ________ FAX ________

6 of 90

REV. 6/02

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14617

PROJECT NAME Recycled water Study
PROJECT NUMBER 27011-07-4200
RECORDER [illegible] (SIGN)
SAMPLERS Henry Castro Jr (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
[✓ A.] 40-ml VOA Vial
[✓ B.] Glass Liter
[✓ C.] Plastic 500-ml
[✓ D.] Plastic Liter
[✓ E.] Brass Tube 250 poly
[✓ F.] Other 500ml glass

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
[✓ H.] Blank/Spike
I. Other ________

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ________

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 218531

	NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION: Unpreserved	HN0$_3$	HCL	H2SO4	Field Filtered (check)	ANALYSIS REQUESTED: See note 1	See note 2	TOC DOC	TDS	8010/8020	See note 3	Total Phosphate			TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
8	1	3-1-10	—	5042	—	—	—	D	H	1					X									1		✓				
	2	↓	↓	↓	↓	↓	↓	C	H		1					X								1		✓				
	3	↓	↓	↓	↓	↓	↓	F	H				1				X							1		✓				
	4	↓	↓	↓	↓	↓	↓	E	H	1								X						1		✓				
	5	↓	↓	↓	↓	↓	↓	A	H			3							X					1		✓	✓			
	6	↓	↓	↓	↓	↓	↓	B	H	1										X				1		✓				
	7	↓	↓	↓	↓	↓	↓	E	H				1								X			1		✓				
9	8	↓	—	5043	—	—	—	D	A	1					X									1		✓				
	9	↓	↓	↓	↓	↓	↓	C	A		1					X								1		✓				
	10	↓	↓	↓	↓	↓	↓	F	A				1				X							1		✓				
	11	↓	↓	↓	↓	↓	↓	E	A	1								X						1		✓				
	12	↓	↓	↓	↓	↓	↓	A	A			3							X					1		✓	✓			
	13	↓	↓	↓	↓	↓	↓	B	A	1										X				1		✓				
	14	↓	↓	↓	↓	↓	↓	E	A				1								X			1		✓				
	15																													
	16																													

NOTES / MISCELLANEOUS
1. Alkalinty, Sulfate, Nitrite, Nitrate, chloride.
2. Boron, Calcium, Magnesium, Sodium, Potassium.
3. HAA6 full list + Bromochloroacetic acid.

Container Sealed with Custody Seal: Yes ☑ No ☐

Field / Container Temp.

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	146-13, 14, 15, 16		3/1/10	1430		3/1/10	1430

Send Lab Results to (Name): Wes Hawthorne CC Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
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☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ________________ TEL ________ FAX ________

REV. 6/02

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COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 218531 Date Received 3/1/10 Number of coolers 5
Client LOCUS Project RECYCLED WATER STUDY

Date Opened 3/1/10 By (print) M. VILLANUEVA (sign)
Date Logged in ↓ By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) YES [✓ NO]
Shipping info

2A. Were custody seals present? ... ☒ YES (circle) [✓ on cooler] on samples ☐ NO
How many 5 Name T. MURPHY Date 3/1/10

2B. Were custody seals intact upon arrival? [✓ YES] NO N/A

3. Were custody papers dry and intact when received? [✓ YES] NO

4. Were custody papers filled out properly (ink, signed, etc)? [✓ YES] NO

5. Is the project identifiable from custody papers? (If so fill out top of form) [✓ YES] NO

6. Indicate the packing in cooler: (if other, describe)

☒ Bubble Wrap ☐ Foam blocks ☒ Bags ☐ None
☐ Cloth material ☐ Cardboard ☐ Styrofoam ☐ Paper towels

7. Temperature documentation:

Type of ice used: ☒ Wet ☐ Blue/Gel ☐ None Temp(°C) 1.0 3/1/10 1707 MV
ONLY 1 COOLER W/ TEMP BLANK

☐ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES [✓ NO]
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? [✓ YES] NO

10. Are samples in the appropriate containers for indicated tests? [✓ YES] NO

11. Are sample labels present, in good condition and complete? [✓ YES] NO

12. Do the sample labels agree with custody papers? [✓ YES] NO

13. Was sufficient amount of sample sent for tests requested? YES [✓ NO]

14. Are the samples appropriately preserved? [✓ YES] NO N/A

15. Are bubbles > 6mm absent in VOA samples? [✓ YES] NO N/A

16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

SAMPLE # 6, 7 & 8 LIMITED SAMPLES

SAMPLE #6 NO CONTAINER REC'D FOR PO4-T USE TOC/DOC CONTAINER

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1

Rev. 6 Number 1 of 3
Effective: 23 July 2008
Z:\qc\forms\checklists\Cooler Receipt Checklist_rv6.doc

Curtis & Tompkins Sample Preservation for 218531

Sample	pH: <2	>12	Other
-001a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☐	☐	
f	☑	☐	
g	☑	☐	
h	☑	☐	
i	☐	☐	
-002a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☐	☐	
f	☑	☐	
g	☑	☐	
h	☑	☐	
i	☐	☐	
-003a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☐	☐	
f	☑	☐	
g	☑	☐	
h	☑	☐	
i	☐	☐	
-004a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☐	☐	
f	☑	☐	
g	☑	☐	
h	☑	☐	
i	☐	☐	
-005a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☐	☐	
f	☑	☐	
g	☐	☑	
h	☐	☐	
i	☑	☐	
j	☑	☐	
k	☐	☐	
-006a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☑	☐	
e	☑	☐	
f	☑	☐	
g	☐	☐	
h	☐	☐	
i	☐	☐	
-007a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☑	☐	
e	☑	☐	
f	☑	☐	
g	☑	☐	
h	☐	☐	
i	☐	☐	
-008a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☐	☐	
f	☑	☐	
g	☑	☐	
h	☑	☐	
i	☐	☐	
-009a	☐	☐	
b	☐	☐	
c	☐	☐	
d	☐	☐	
e	☐	☐	
f	☑	☐	
g	☑	☐	
h	☑	☐	
i	☐	☐	

Analyst: KW

Date: 3/1/10

Page 1 of 1

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	160522
Lab ID:	218531-001	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	1.9	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	122	73-140
Toluene-d8	102	88-113
Bromofluorobenzene	102	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	160522
Lab ID:	218531-001	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	122	73-140
Toluene-d8	102	88-113
Bromofluorobenzene	102	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	160522
Lab ID:	218531-002	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	121	73-140
Toluene-d8	102	88-113
Bromofluorobenzene	104	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	160522
Lab ID:	218531-002	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	121	73-140
Toluene-d8	102	88-113
Bromofluorobenzene	104	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	160522
Lab ID:	218531-003	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	121	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	101	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	160522
Lab ID:	218531-003	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	121	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	101	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	160522
Lab ID:	218531-004	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	123	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	100	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	160522
Lab ID:	218531-004	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	123	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	100	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	160522
Lab ID:	218531-005	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	8.8	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	8.6	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	4.2	0.5
Chlorobenzene	ND	0.5
Bromoform	0.8	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	125	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	101	80-127

ND= Not Detected

RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	SOURCE	Batch#:	160522
Lab ID:	218531-005	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	**Result**	**RL**
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	125	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	101	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L5 COMP	Batch#:	160516
Lab ID:	218531-006	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	87	73-140
Toluene-d8	97	88-113
Bromofluorobenzene	109	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L5 COMP	Batch#:	160516
Lab ID:	218531-006	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	87	73-140
Toluene-d8	97	88-113
Bromofluorobenzene	109	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L10 COMP	Batch#:	160516
Lab ID:	218531-007	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	90	73-140
Toluene-d8	97	88-113
Bromofluorobenzene	107	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	L10 COMP	Batch#:	160516
Lab ID:	218531-007	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	90	73-140
Toluene-d8	97	88-113
Bromofluorobenzene	107	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	5042	Batch#:	160516
Lab ID:	218531-008	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	91	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	107	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	5042	Batch#:	160516
Lab ID:	218531-008	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	91	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	107	80-127

ND= Not Detected
RL= Reporting Limit

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Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	5043	Batch#:	160516
Lab ID:	218531-009	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	8.3	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	8.1	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	3.9	0.5
Chlorobenzene	ND	0.5
Bromoform	0.9	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	91	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	109	80-127

ND= Not Detected
RL= Reporting Limit

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	5043	Batch#:	160516
Lab ID:	218531-009	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	91	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	109	80-127

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	160516
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Type: BS Lab ID: QC534477

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	25.00	27.27	109	71-136
Trichloroethene	25.00	25.16	101	80-124
Chlorobenzene	25.00	25.95	104	84-118

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	89	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	95	80-127

Type: BSD Lab ID: QC534478

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	25.00	27.19	109	71-136	0	15
Trichloroethene	25.00	25.00	100	80-124	1	13
Chlorobenzene	25.00	25.82	103	84-118	1	11

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	89	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	96	80-127

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	160516
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	1.000		

Type: BS

Lab ID: QC534477

Analyte	Spiked	Result	%REC	Limits
MTBE	25.00	22.56	90	61-123
Benzene	25.00	26.45	106	81-122
Toluene	25.00	25.98	104	82-122
Ethylbenzene	25.00	25.51	102	86-125
m,p-Xylenes	50.00	52.21	104	83-127
o-Xylene	25.00	25.56	102	81-122

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	89	73-140
Toluene-d8	98	88-113
Bromofluorobenzene	95	80-127

Type: BSD

Lab ID: QC534478

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	25.00	22.75	91	61-123	1	11
Benzene	25.00	26.18	105	81-122	1	12
Toluene	25.00	26.05	104	82-122	0	12
Ethylbenzene	25.00	25.55	102	86-125	0	12
m,p-Xylenes	50.00	52.58	105	83-127	1	13
o-Xylene	25.00	25.67	103	81-122	0	12

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	89	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	96	80-127

RPD= Relative Percent Difference

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC534479	Batch#:	160516
Matrix:	Water	Analyzed:	03/02/10
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	88	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	108	80-127

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC534479	Batch#:	160516
Matrix:	Water	Analyzed:	03/02/10
Units:	ug/L		

Analyte	Result	RL
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	88	73-140
Toluene-d8	99	88-113
Bromofluorobenzene	108	80-127

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC534500	Batch#:	160522
Matrix:	Water	Analyzed:	03/02/10
Units:	ug/L		

Analyte	Result	RL
Chloromethane	ND	1.0
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Chloroethane	ND	1.0
Trichlorofluoromethane	ND	1.0
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	20
trans-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
cis-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
cis-1,3-Dichloropropene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	118	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	100	80-127

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC534500	Batch#:	160522
Matrix:	Water	Analyzed:	03/02/10
Units:	ug/L		

Analyte	**Result**	**RL**
MTBE	ND	0.5
Benzene	ND	0.5
Toluene	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5

Surrogate	**%REC**	**Limits**
1,2-Dichloroethane-d4	118	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	100	80-127

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC534501	Batch#:	160522
Matrix:	Water	Analyzed:	03/02/10
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
1,1-Dichloroethene	20.00	19.52	98	71-136
Trichloroethene	20.00	22.11	111	80-124
Chlorobenzene	20.00	19.67	98	84-118

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	116	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	100	80-127

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC534501	Batch#:	160522
Matrix:	Water	Analyzed:	03/02/10
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
MTBE	20.00	16.83	84	61-123
Benzene	20.00	20.74	104	81-122
Toluene	20.00	20.38	102	82-122
Ethylbenzene	20.00	21.46	107	86-125
m,p-Xylenes	40.00	41.26	103	83-127
o-Xylene	20.00	20.60	103	81-122

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	116	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	100	80-127

Batch QC Report

Purgeable Halocarbons by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	160522
MSS Lab ID:	218522-004	Sampled:	02/25/10
Matrix:	Water	Received:	02/26/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	14.29		

Type: MS　　Lab ID: QC534504

Analyte	MSS Result	Spiked	Result	%REC	Limits
1,1-Dichloroethene	10.21	357.1	369.3	101	68-144
Trichloroethene	808.5	357.1	1,215	114	63-142
Chlorobenzene	<1.429	357.1	355.8	100	84-118

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	118	73-140
Toluene-d8	102	88-113
Bromofluorobenzene	100	80-127

Type: MSD　　Lab ID: QC534505

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
1,1-Dichloroethene	357.1	352.6	96	68-144	5	14
Trichloroethene	357.1	1,203	111	63-142	1	12
Chlorobenzene	357.1	356.2	100	84-118	0	11

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	116	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	98	80-127

RPD= Relative Percent Difference

Batch QC Report

Purgeable Aromatics by GC/MS

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 5030B
Project#:	27011-07-4200	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	160522
MSS Lab ID:	218522-004	Sampled:	02/25/10
Matrix:	Water	Received:	02/26/10
Units:	ug/L	Analyzed:	03/02/10
Diln Fac:	14.29		

Type: MS Lab ID: QC534504

Analyte	MSS Result	Spiked	Result	%REC	Limits
MTBE	<1.429	357.1	318.3	89	59-128
Benzene	<1.429	357.1	382.9	107	75-130
Toluene	<1.429	357.1	374.4	105	79-129
Ethylbenzene	<1.461	357.1	385.7	108	81-130
m,p-Xylenes	<1.939	714.3	752.8	105	77-133
o-Xylene	<1.888	357.1	370.8	104	82-123

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	118	73-140
Toluene-d8	102	88-113
Bromofluorobenzene	100	80-127

Type: MSD Lab ID: QC534505

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
MTBE	357.1	314.2	88	59-128	1	12
Benzene	357.1	377.9	106	75-130	1	11
Toluene	357.1	367.2	103	79-129	2	12
Ethylbenzene	357.1	381.3	107	81-130	1	12
m,p-Xylenes	714.3	751.2	105	77-133	0	12
o-Xylene	357.1	368.9	103	82-123	0	11

Surrogate	%REC	Limits
1,2-Dichloroethane-d4	116	73-140
Toluene-d8	101	88-113
Bromofluorobenzene	98	80-127

RPD= Relative Percent Difference

Boron

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Prepared:	03/02/10
Diln Fac:	1.000	Analyzed:	03/04/10
Batch#:	160555		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	218531-001	170	100
MW-2	SAMPLE	218531-002	130	100
MW-3	SAMPLE	218531-003	190	100
MW-4	SAMPLE	218531-004	170	100
SOURCE	SAMPLE	218531-005	390	100
L5 COMP	SAMPLE	218531-006	250	100
L10 COMP	SAMPLE	218531-007	240	100
5042	SAMPLE	218531-008	ND	100
5043	SAMPLE	218531-009	400	100
	BLANK	QC534602	ND	100

ND= Not Detected
RL= Reporting Limit

Calcium

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Prepared:	03/02/10
Batch#:	160555	Analyzed:	03/04/10

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	218531-001	77,000	500	1.000
MW-2	SAMPLE	218531-002	58,000	500	1.000
MW-3	SAMPLE	218531-003	120,000	3,000	10.00
MW-4	SAMPLE	218531-004	81,000	500	1.000
SOURCE	SAMPLE	218531-005	52,000	500	1.000
L5 COMP	SAMPLE	218531-006	140,000	3,000	10.00
L10 COMP	SAMPLE	218531-007	120,000	3,000	10.00
5042	SAMPLE	218531-008	ND	500	1.000
5043	SAMPLE	218531-009	54,000	500	1.000
	BLANK	QC534602	ND	500	1.000

ND= Not Detected
RL= Reporting Limit

Potassium

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Prepared:	03/02/10
Diln Fac:	1.000	Analyzed:	03/04/10
Batch#:	160555		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	218531-001	1,100	500
MW-2	SAMPLE	218531-002	980	500
MW-3	SAMPLE	218531-003	710	500
MW-4	SAMPLE	218531-004	ND	500
SOURCE	SAMPLE	218531-005	12,000	500
L5 COMP	SAMPLE	218531-006	5,400	500
L10 COMP	SAMPLE	218531-007	1,100	500
5042	SAMPLE	218531-008	ND	500
5043	SAMPLE	218531-009	12,000	500
	BLANK	QC534602	ND	500

ND= Not Detected
RL= Reporting Limit

Magnesium

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Prepared:	03/02/10
Diln Fac:	1.000	Analyzed:	03/04/10
Batch#:	160555		

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	218531-001	44,000	500
MW-2	SAMPLE	218531-002	35,000	500
MW-3	SAMPLE	218531-003	59,000	500
MW-4	SAMPLE	218531-004	44,000	500
SOURCE	SAMPLE	218531-005	29,000	500
L5 COMP	SAMPLE	218531-006	66,000	500
L10 COMP	SAMPLE	218531-007	98,000	500
5042	SAMPLE	218531-008	ND	500
5043	SAMPLE	218531-009	30,000	500
	BLANK	QC534602	ND	500

ND= Not Detected
RL= Reporting Limit

Sodium

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	ug/L	Prepared:	03/02/10
Batch#:	160555		

Field ID	Type	Lab ID	Result	RL	Diln Fac	Analyzed
MW-1	SAMPLE	218531-001	34,000	500	1.000	03/04/10
MW-2	SAMPLE	218531-002	30,000	5,000	10.00	03/04/10
MW-3	SAMPLE	218531-003	45,000	5,000	10.00	03/04/10
MW-4	SAMPLE	218531-004	33,000	5,000	10.00	03/04/10
SOURCE	SAMPLE	218531-005	120,000	5,000	10.00	03/04/10
L5 COMP	SAMPLE	218531-006	210,000	5,000	10.00	03/04/10
L10 COMP	SAMPLE	218531-007	66,000	5,000	10.00	03/04/10
5042	SAMPLE	218531-008	ND	500	1.000	03/05/10
5043	SAMPLE	218531-009	120,000	5,000	10.00	03/04/10
	BLANK	QC534602	ND	500	1.000	03/04/10

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Boron

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Boron	Batch#:	160555
Field ID:	MW-1	Sampled:	03/01/10
MSS Lab ID:	218531-001	Received:	03/01/10
Matrix:	Water	Prepared:	03/02/10
Units:	ug/L	Analyzed:	03/04/10
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC534603		1,000	956.4	96	81-121		
BSD	QC534604		1,000	1,017	102	81-121	6	14
MS	QC534605	169.5	1,000	1,180	101	64-136		
MSD	QC534606		1,000	1,138	97	64-136	4	20

RPD= Relative Percent Difference

Batch QC Report

Calcium

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Calcium	Batch#:	160555
Field ID:	MW-1	Sampled:	03/01/10
MSS Lab ID:	218531-001	Received:	03/01/10
Matrix:	Water	Prepared:	03/02/10
Units:	ug/L	Analyzed:	03/04/10

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**	**Diln Fac**
BS	QC534603		20,000	18,540	93	71-129			1.000
BSD	QC534604		20,000	18,670	93	71-129	1	17	1.000
MS	QC534605	77,440	20,000	102,000	123	42-148			10.00
MSD	QC534606		20,000	97,730	101	42-148	4	29	10.00

RPD= Relative Percent Difference

Batch QC Report

Potassium

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Potassium	Batch#:	160555
Field ID:	MW-1	Sampled:	03/01/10
MSS Lab ID:	218531-001	Received:	03/01/10
Matrix:	Water	Prepared:	03/02/10
Units:	ug/L	Analyzed:	03/04/10
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC534603		10,000	9,302	93	67-123		
BSD	QC534604		10,000	9,397	94	67-123	1	21
MS	QC534605	1,143	10,000	10,170	90	51-141		
MSD	QC534606		10,000	9,704	86	51-141	5	26

RPD= Relative Percent Difference

Batch QC Report

Magnesium

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Magnesium	Batch#:	160555
Field ID:	MW-1	Sampled:	03/01/10
MSS Lab ID:	218531-001	Received:	03/01/10
Matrix:	Water	Prepared:	03/02/10
Units:	ug/L	Analyzed:	03/04/10
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC534603		20,000	18,210	91	71-130		
BSD	QC534604		20,000	17,810	89	71-130	2	20
MS	QC534605	44,120	20,000	63,580	97	48-142		
MSD	QC534606		20,000	61,030	85	48-142	4	24

RPD= Relative Percent Difference

Batch QC Report

Sodium

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	EPA 3010A
Project#:	27011-07-4200	Analysis:	EPA 6010B
Analyte:	Sodium	Batch#:	160555
Field ID:	MW-1	Sampled:	03/01/10
MSS Lab ID:	218531-001	Received:	03/01/10
Matrix:	Water	Prepared:	03/02/10
Units:	ug/L	Analyzed:	03/04/10
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
BS	QC534603		20,000	18,790	94	71-127		
BSD	QC534604		20,000	18,850	94	71-127	0	21
MS	QC534605	33,550	20,000	54,110	103	45-148		
MSD	QC534606		20,000	50,710	86	45-148	6	29

RPD= Relative Percent Difference

Curtis & Tompkins, Ltd.

Curtis & Tompkins Laboratories Analytical Report

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	160483
Units:	mg/L	Received:	03/01/10

Field ID:	MW-1	Lab ID:	218531-001
Type:	SAMPLE	Sampled:	03/01/10 09:15

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	60	1.0	5.000	03/01/10 19:33
Nitrogen, Nitrite	ND	0.05	1.000	03/01/10 19:16
Nitrogen, Nitrate	3.1	0.05	1.000	03/01/10 19:16
Sulfate	68	2.5	5.000	03/01/10 19:33

Field ID:	MW-2	Lab ID:	218531-002
Type:	SAMPLE	Sampled:	03/01/10 10:20

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	36	1.0	5.000	03/01/10 20:26
Nitrogen, Nitrite	ND	0.05	1.000	03/01/10 20:08
Nitrogen, Nitrate	2.1	0.05	1.000	03/01/10 20:08
Sulfate	45	0.50	1.000	03/01/10 20:08

Field ID:	MW-3	Lab ID:	218531-003
Type:	SAMPLE	Sampled:	03/01/10 12:05

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	95	1.0	5.000	03/01/10 21:53
Nitrogen, Nitrite	ND	0.05	1.000	03/01/10 21:00
Nitrogen, Nitrate	5.4	0.25	5.000	03/01/10 21:53
Sulfate	70	2.5	5.000	03/01/10 21:53

Field ID:	MW-4	Lab ID:	218531-004
Type:	SAMPLE	Sampled:	03/01/10 11:15

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	61	1.0	5.000	03/01/10 22:45
Nitrogen, Nitrite	ND	0.05	1.000	03/01/10 22:27
Nitrogen, Nitrate	1.6	0.05	1.000	03/01/10 22:27
Sulfate	61	2.5	5.000	03/01/10 22:45

Field ID:	SOURCE	Lab ID:	218531-005
Type:	SAMPLE	Sampled:	03/01/10 09:15

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	190	2.0	10.00	03/01/10 23:54
Nitrogen, Nitrite	0.65	0.05	1.000	03/01/10 23:20
Nitrogen, Nitrate	7.7	0.25	5.000	03/01/10 23:37
Sulfate	100	2.5	5.000	03/01/10 23:37

ND= Not Detected
RL= Reporting Limit

Curtis & Tompkins Laboratories Analytical Report

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Matrix:	Water	Batch#:	160483
Units:	mg/L	Received:	03/01/10

Field ID: L5 COMP　　Lab ID: 218531-006
Type: SAMPLE　　Sampled: 03/01/10

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	270	5.0	25.00	03/01/10 18:12
Nitrogen, Nitrite	ND	0.05	1.000	03/02/10 01:39
Nitrogen, Nitrate	1.8	0.05	1.000	03/02/10 01:39
Sulfate	270	13	25.00	03/01/10 18:12

Field ID: L10 COMP　　Lab ID: 218531-007
Type: SAMPLE　　Sampled: 03/01/10

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	130	2.0	10.00	03/02/10 02:31
Nitrogen, Nitrite	ND	0.05	1.000	03/02/10 02:14
Nitrogen, Nitrate	3.1	0.05	1.000	03/02/10 02:14
Sulfate	130	5.0	10.00	03/02/10 02:31

Field ID: 5042　　Diln Fac: 1.000
Type: SAMPLE　　Sampled: 03/01/10
Lab ID: 218531-008　　Analyzed: 03/01/10 18:59

Analyte	Result	RL
Chloride	ND	0.20
Nitrogen, Nitrite	ND	0.05
Nitrogen, Nitrate	ND	0.05
Sulfate	ND	0.50

Field ID: 5043　　Lab ID: 218531-009
Type: SAMPLE　　Sampled: 03/01/10

Analyte	Result	RL	Diln Fac	Analyzed
Chloride	190	2.0	10.00	03/02/10 01:22
Nitrogen, Nitrite	0.66	0.05	1.000	03/02/10 00:12
Nitrogen, Nitrate	7.7	0.25	5.000	03/02/10 00:29
Sulfate	100	2.5	5.000	03/02/10 00:29

Type: BLANK　　Diln Fac: 1.000
Lab ID: QC534329　　Analyzed: 03/01/10 11:45

Analyte	Result	RL
Chloride	ND	0.20
Nitrogen, Nitrite	ND	0.05
Nitrogen, Nitrate	ND	0.05
Sulfate	ND	0.50

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC534330	Batch#:	160483
Matrix:	Water	Analyzed:	03/01/10 17:07
Units:	mg/L		

Analyte	Spiked	Result	%REC	Limits
Chloride	4.000	4.048	101	90-109
Nitrogen, Nitrite	1.000	1.015	102	88-110
Nitrogen, Nitrate	1.000	1.004	100	89-110
Sulfate	10.00	10.07	101	89-109

Batch QC Report

Curtis & Tompkins Laboratories Analytical Report

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	EPA 300.0
Field ID:	ZZZZZZZZZZ	Diln Fac:	10.00
MSS Lab ID:	218517-019	Batch#:	160483
Matrix:	Water	Sampled:	02/27/10 16:40
Units:	mg/L	Received:	03/01/10

Type: MS　　Analyzed: 03/01/10 13:46
Lab ID: QC534331

Analyte	MSS Result	Spiked	Result	%REC	Limits
Chloride	159.4	20.00	176.4	85 NM	68-130
Nitrogen, Nitrite	0.6348	5.000	5.698	101	74-136
Nitrogen, Nitrate	0.9999	5.000	6.105	102	65-137
Sulfate	64.50	50.00	117.4	106	64-136

Type: MSD　　Analyzed: 03/01/10 14:04
Lab ID: QC534332

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Chloride	20.00	176.3	84 NM	68-130	0	4
Nitrogen, Nitrite	5.000	5.598	99	74-136	2	17
Nitrogen, Nitrate	5.000	6.025	101	65-137	1	6
Sulfate	50.00	115.8	103	64-136	1	5

NM= Not Meaningful: Sample concentration > 4X spike concentration
RPD= Relative Percent Difference

Alkalinity

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	03/01/10
Units:	mg/L	Received:	03/01/10
Batch#:	160669	Analyzed:	03/05/10

Field ID:	MW-1	Lab ID:	218531-001
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	330	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	330	6.7

Field ID:	MW-2	Lab ID:	218531-002
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	300	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	300	6.7

Field ID:	MW-3	Lab ID:	218531-003
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	450	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	450	6.7

Field ID:	MW-4	Lab ID:	218531-004
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	360	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	360	6.7

Field ID:	SOURCE	Lab ID:	218531-005
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	210	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	210	6.7

ND= Not Detected
RL= Reporting Limit

Alkalinity

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Matrix:	Water	Sampled:	03/01/10
Units:	mg/L	Received:	03/01/10
Batch#:	160669	Analyzed:	03/05/10

Field ID:	L5 COMP	Lab ID:	218531-006
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	600	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	600	6.7

Field ID:	L10 COMP	Lab ID:	218531-007
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	680	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	680	6.7

Field ID:	5042	Lab ID:	218531-008
Type:	SAMPLE	Diln Fac:	1.000

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	ND	1.0

Field ID:	5043	Lab ID:	218531-009
Type:	SAMPLE	Diln Fac:	6.700

Analyte	Result	RL
Alkalinity, Bicarbonate	210	6.7
Alkalinity, Carbonate	ND	6.7
Alkalinity, Hydroxide	ND	6.7
Alkalinity, Total as CaCO3	210	6.7

Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC535037		

Analyte	Result	RL
Alkalinity, Bicarbonate	ND	1.0
Alkalinity, Carbonate	ND	1.0
Alkalinity, Hydroxide	ND	1.0
Alkalinity, Total as CaCO3	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Alkalinity

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Units:	mg/L
Type:	LCS	Diln Fac:	4.000
Lab ID:	QC535038	Batch#:	160669
Matrix:	Water	Analyzed:	03/05/10

Spiked	Result	%REC	Limits
200.0	192.4	96	91-103

Batch QC Report

Alkalinity

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2320B
Analyte:	Alkalinity, Total as CaCO3	Diln Fac:	4.000
Field ID:	MW-1	Batch#:	160669
MSS Lab ID:	218531-001	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	mg/L	Analyzed:	03/05/10

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC535039	332.0	200.0	523.6	96	80-118		
MSD	QC535040		200.0	525.2	97	80-118	0	2

RPD= Relative Percent Difference

Total Cyanide

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Batch#:	160653
Field ID:	SOURCE	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	mg/L	Analyzed:	03/05/10
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	218531-005	0.02	0.01
BLANK	QC534985	ND	0.01

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Cyanide

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM4500CN-E
Analyte:	Cyanide	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	160653
MSS Lab ID:	218589-001	Sampled:	03/03/10
Matrix:	Water	Received:	03/03/10
Units:	mg/L	Analyzed:	03/05/10

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC534986	<0.01000	0.2000	0.2003	100	46-143		
MSD	QC534987		0.2000	0.1975	99	46-143	1	17
LCS	QC534988		0.2000	0.1965	98	79-119		

RPD= Relative Percent Difference

Dissolved Organic Carbon (DOC)

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Batch#:	160663
Matrix:	Water	Sampled:	03/01/10
Units:	mg/L	Received:	03/01/10
Diln Fac:	1.000	Analyzed:	03/05/10

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	218531-001	ND	1.0
MW-2	SAMPLE	218531-002	ND	1.0
MW-3	SAMPLE	218531-003	ND	1.0
MW-4	SAMPLE	218531-004	ND	1.0
SOURCE	SAMPLE	218531-005	4.8	1.0
L5 COMP	SAMPLE	218531-006	8.2	1.0
L10 COMP	SAMPLE	218531-007	3.6	1.0
5042	SAMPLE	218531-008	ND	1.0
5043	SAMPLE	218531-009	5.0	1.0
	BLANK	QC535014	ND	1.0

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Dissolved Organic Carbon (DOC)

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Dissolved Organic Carbon	Diln Fac:	1.000
Field ID:	MW-1	Batch#:	160663
MSS Lab ID:	218531-001	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	mg/L	Analyzed:	03/05/10

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**%REC**	**Limits**	**RPD**	**Lim**
LCS	QC535015		10.00	9.287	93	90-110		
MS	QC535016	0.6516	2.000	2.309	83	62-139		
MSD	QC535017		2.000	2.344	85	62-139	1	17

RPD= Relative Percent Difference

Surfactants (MBAS)

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Batch#:	160558
Field ID:	SOURCE	Sampled:	03/01/10 09:15
Matrix:	Water	Received:	03/01/10
Units:	mg/L	Analyzed:	03/03/10 09:00
Diln Fac:	1.000		

Type	**Lab ID**	**Result**	**RL**
SAMPLE	218531-005	ND	0.20
BLANK	QC534621	ND	0.20

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Surfactants (MBAS)

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Analysis:	SM5540C
Project#:	27011-07-4200		
Analyte:	Surfactants (MBAS)	Diln Fac:	1.000
Field ID:	SOURCE	Batch#:	160558
MSS Lab ID:	218531-005	Sampled:	03/01/10 09:15
Matrix:	Water	Received:	03/01/10
Units:	mg/L	Analyzed:	03/03/10 09:00

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC534622		0.6000	0.5604	93	80-120		
MS	QC534623	<0.2000	0.6000	0.7174	120	70-130		
MSD	QC534624		0.6000	0.7402	123	70-130	3	30

RPD= Relative Percent Difference

Total Phosphorous

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	mg/L	Analyzed:	03/05/10
Batch#:	160624		

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	218531-001	0.42	0.075	2.500
MW-2	SAMPLE	218531-002	0.040	0.030	1.000
MW-3	SAMPLE	218531-003	0.046	0.030	1.000
MW-4	SAMPLE	218531-004	ND	0.030	1.000
SOURCE	SAMPLE	218531-005	0.21	0.030	1.000
L5 COMP	SAMPLE	218531-006	0.059	0.030	1.000
L10 COMP	SAMPLE	218531-007	0.048	0.030	1.000
5042	SAMPLE	218531-008	ND	0.030	1.000
5043	SAMPLE	218531-009	0.20	0.030	1.000
	BLANK	QC534865	ND	0.030	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Phosphorous

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Diln Fac:	1.000
Field ID:	5043	Batch#:	160624
MSS Lab ID:	218531-009	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	mg/L	Analyzed:	03/05/10

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC534866	0.2032	0.07900	0.2409	48	41-144		
MSD	QC534867		0.07900	0.2375	43	41-144	1	24
LCS	QC534868		0.1980	0.2030	103	92-113		

RPD= Relative Percent Difference

Total Dissolved Solids (TDS)

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Sampled:	03/01/10
Matrix:	Water	Received:	03/01/10
Units:	mg/L	Prepared:	03/04/10
Batch#:	160639	Analyzed:	03/05/10

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-1	SAMPLE	218531-001	570	10	1.000
MW-2	SAMPLE	218531-002	430	10	1.000
MW-3	SAMPLE	218531-003	720	10	1.000
MW-4	SAMPLE	218531-004	560	10	1.000
SOURCE	SAMPLE	218531-005	740	10	1.000
L5 COMP	SAMPLE	218531-006	1,470	13	1.250
L10 COMP	SAMPLE	218531-007	1,060	13	1.250
5042	SAMPLE	218531-008	ND	10	1.000
5043	SAMPLE	218531-009	720	10	1.000
	BLANK	QC534925	ND	10	1.000

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Dissolved Solids (TDS)

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Batch#:	160639
Field ID:	ZZZZZZZZZZ	Sampled:	03/02/10
MSS Lab ID:	218562-001	Received:	03/02/10
Matrix:	Water	Prepared:	03/04/10
Units:	mg/L	Analyzed:	03/05/10
Diln Fac:	1.000		

Type	**Lab ID**	**MSS Result**	**Spiked**	**Result**	**RL**	**%REC**	**Limits**	**RPD**	**Lim**
BS	QC534926		104.0	92.00		88	75-106		
BSD	QC534927		104.0	88.00		85	75-106	4	15
SDUP	QC534928	388.0		396.0	10.00			2	12

RL= Reporting Limit
RPD= Relative Percent Difference

Total Organic Carbon (TOC)

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Batch#:	160532
Matrix:	Water	Sampled:	03/01/10
Units:	mg/L	Received:	03/01/10
Diln Fac:	1.000	Analyzed:	03/03/10

Field ID	Type	Lab ID	Result	RL
MW-1	SAMPLE	218531-001	0.66	0.50
MW-2	SAMPLE	218531-002	0.75	0.50
MW-3	SAMPLE	218531-003	0.79	0.50
MW-4	SAMPLE	218531-004	0.59	0.50
SOURCE	SAMPLE	218531-005	6.2	0.50
L5 COMP	SAMPLE	218531-006	11	0.50
L10 COMP	SAMPLE	218531-007	4.6	0.50
5042	SAMPLE	218531-008	ND	0.50
5043	SAMPLE	218531-009	6.3	0.50
	BLANK	QC534533	ND	0.50

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Organic Carbon (TOC)

Lab #:	218531	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	METHOD
Project#:	27011-07-4200	Analysis:	SM5310C
Analyte:	Total Organic Carbon	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	160532
MSS Lab ID:	218517-016	Sampled:	02/27/10
Matrix:	Water	Received:	03/01/10
Units:	mg/L	Analyzed:	03/03/10

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
LCS	QC534534		10.00	9.777	98	90-110		
MS	QC534535	5.139	2.000	7.142	100	21-156		
MSD	QC534536		2.000	7.123	99	21-156	0	30

RPD= Relative Percent Difference

Laboratory Job Number 218531

Subcontracted Products

Columbia Analytical Services

Columbia
Analytical Services^{INC}

1317 S. 13th Avenue, Kelso, WA 98626 360.577.7222 360.636.1068 (fax) www.caslab.com

March 23, 2010 Analytical Report for Service Request No: K1001987

Micah Smith
Curtis & Tompkins, Ltd.
2323 Fifth Street
Berkeley, CA 94710

RE: Recycled Water Study/218531

Dear Micah:

Enclosed are the results of the samples submitted to our laboratory on March 04, 2010. For your reference, these analyses have been assigned our service request number K1001987.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3281. You may also contact me via Email at PDivvela@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

Pradeep Divvela
Project Chemist

PD/rh

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value that was detected outside the quantitation range.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value that was detected outside the quantitation range.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.1 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	**Number**
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	Curtis & Tompkins, Ltd.	**Service Request No.:**	K1001987
Project:	Recycled Water Study	**Date Received:**	03/04/10
Sample Matrix:	Drinking Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Matrix Spike (MS), and Laboratory Control Sample (LCS).

Sample Receipt

Nine water samples were received for analysis at Columbia Analytical Services on 03/04/10. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Haloacetic Acids by EPA 552.2

Sample Notes and Discussion:
The control criteria for matrix spike recovery of Trichloroacetic Acid for Batch QC were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

No other anomalies associated with the analysis of these samples were observed.

Approved by________________________ **Date** 03/23/10

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Collected:**	03/01/2010
Sample Matrix:	Drinking water	**Date Received:**	03/04/2010

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-1	**Units:**	ug/L
Lab Code:	K1001987-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	03/12/10	03/12/10	KWG1002096	
Bromoacetic Acid	ND	U	1.0	0.13	1	03/12/10	03/12/10	KWG1002096	
Dichloroacetic Acid	ND	U	1.0	0.18	1	03/12/10	03/12/10	KWG1002096	
Trichloroacetic Acid	ND	U	1.0	0.33	1	03/12/10	03/12/10	KWG1002096	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	03/12/10	03/12/10	KWG1002096	
Dibromoacetic Acid	ND	U	1.0	0.14	1	03/12/10	03/12/10	KWG1002096	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	108	70-130	03/12/10	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Collected:**	03/01/2010
Sample Matrix:	Drinking water	**Date Received:**	03/04/2010

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-2	**Units:**	ug/L
Lab Code:	K1001987-002	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromoacetic Acid	ND	U	1.0	0.13	1	03/12/10	03/12/10	KWG1002096	
Chloroacetic Acid	**0.26**	J	2.0	0.16	1	03/12/10	03/12/10	KWG1002096	
Dichloroacetic Acid	ND	U	1.0	0.18	1	03/12/10	03/12/10	KWG1002096	
Trichloroacetic Acid	ND	U	1.0	0.33	1	03/12/10	03/12/10	KWG1002096	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	03/12/10	03/12/10	KWG1002096	
Dibromoacetic Acid	ND	U	1.0	0.14	1	03/12/10	03/12/10	KWG1002096	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	105	70-130	03/12/10	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Collected:**	03/01/2010
Sample Matrix:	Drinking water	**Date Received:**	03/04/2010

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-3	**Units:**	ug/L
Lab Code:	K1001987-003	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	03/12/10	03/12/10	KWG1002096	
Bromoacetic Acid	ND	U	1.0	0.13	1	03/12/10	03/12/10	KWG1002096	
Dichloroacetic Acid	ND	U	1.0	0.18	1	03/12/10	03/12/10	KWG1002096	
Trichloroacetic Acid	ND	U	1.0	0.33	1	03/12/10	03/12/10	KWG1002096	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	03/12/10	03/12/10	KWG1002096	
Dibromoacetic Acid	ND	U	1.0	0.14	1	03/12/10	03/12/10	KWG1002096	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	97	70-130	03/12/10	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Collected:**	03/01/2010
Sample Matrix:	Drinking water	**Date Received:**	03/04/2010

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	MW-4	**Units:**	ug/L
Lab Code:	K1001987-004	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	03/12/10	03/13/10	KWG1002096	
Bromoacetic Acid	ND	U	0.99	0.13	1	03/12/10	03/13/10	KWG1002096	
Dichloroacetic Acid	ND	U	0.99	0.18	1	03/12/10	03/13/10	KWG1002096	
Trichloroacetic Acid	ND	U	0.99	0.33	1	03/12/10	03/13/10	KWG1002096	
Bromochloroacetic Acid	ND	U	0.99	0.15	1	03/12/10	03/13/10	KWG1002096	
Dibromoacetic Acid	ND	U	0.99	0.14	1	03/12/10	03/13/10	KWG1002096	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	100	70-130	03/13/10	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Collected:**	03/01/2010
Sample Matrix:	Drinking water	**Date Received:**	03/04/2010

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	SOURCE	**Units:**	ug/L
Lab Code:	K1001987-005	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	03/12/10	03/13/10	KWG1002096	
Bromoacetic Acid	ND	U	0.99	0.13	1	03/12/10	03/13/10	KWG1002096	
Dichloroacetic Acid	**0.57**	JP	0.99	0.18	1	03/12/10	03/13/10	KWG1002096	
Trichloroacetic Acid	ND	U	0.99	0.33	1	03/12/10	03/13/10	KWG1002096	
Bromochloroacetic Acid	ND	U	0.99	0.15	1	03/12/10	03/13/10	KWG1002096	
Dibromoacetic Acid	**0.37**	JP	0.99	0.14	1	03/12/10	03/13/10	KWG1002096	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	128	70-130	03/13/10	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Collected:**	03/01/2010
Sample Matrix:	Drinking water	**Date Received:**	03/04/2010

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	L5 COMP	**Units:**	ug/L
Lab Code:	K1001987-006	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	**1.3**	JP	2.0	0.16	1	03/12/10	03/13/10	KWG1002096	
Bromoacetic Acid	ND	U	1.0	0.13	1	03/12/10	03/13/10	KWG1002096	
Dichloroacetic Acid	ND	U	1.0	0.18	1	03/12/10	03/13/10	KWG1002096	
Trichloroacetic Acid	ND	U	1.0	0.33	1	03/12/10	03/13/10	KWG1002096	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	03/12/10	03/13/10	KWG1002096	
Dibromoacetic Acid	ND	U	1.0	0.14	1	03/12/10	03/13/10	KWG1002096	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	110	70-130	03/13/10	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Collected:**	03/01/2010
Sample Matrix:	Drinking water	**Date Received:**	03/04/2010

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	L10 COMP	**Units:**	ug/L
Lab Code:	K1001987-007	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Bromoacetic Acid	ND	U	1.0	0.13	1	03/12/10	03/13/10	KWG1002096	
Chloroacetic Acid	**0.60**	J	2.0	0.16	1	03/12/10	03/13/10	KWG1002096	
Dichloroacetic Acid	ND	U	1.0	0.18	1	03/12/10	03/13/10	KWG1002096	
Trichloroacetic Acid	ND	U	1.0	0.33	1	03/12/10	03/13/10	KWG1002096	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	03/12/10	03/13/10	KWG1002096	
Dibromoacetic Acid	ND	U	1.0	0.14	1	03/12/10	03/13/10	KWG1002096	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	101	70-130	03/13/10	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Collected:**	03/01/2010
Sample Matrix:	Drinking water	**Date Received:**	03/04/2010

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	5042	**Units:**	ug/L
Lab Code:	K1001987-008	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	03/12/10	03/13/10	KWG1002096	
Bromoacetic Acid	ND	U	1.0	0.13	1	03/12/10	03/13/10	KWG1002096	
Dichloroacetic Acid	ND	U	1.0	0.18	1	03/12/10	03/13/10	KWG1002096	
Trichloroacetic Acid	ND	U	1.0	0.33	1	03/12/10	03/13/10	KWG1002096	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	03/12/10	03/13/10	KWG1002096	
Dibromoacetic Acid	ND	U	1.0	0.14	1	03/12/10	03/13/10	KWG1002096	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	95	70-130	03/13/10	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Collected:**	03/01/2010
Sample Matrix:	Drinking water	**Date Received:**	03/04/2010

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	5043	**Units:**	ug/L
Lab Code:	K1001987-009	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	03/12/10	03/13/10	KWG1002096	
Bromoacetic Acid	ND	U	0.99	0.13	1	03/12/10	03/13/10	KWG1002096	
Dichloroacetic Acid	**0.56**	JP	0.99	0.18	1	03/12/10	03/13/10	KWG1002096	
Trichloroacetic Acid	ND	U	0.99	0.33	1	03/12/10	03/13/10	KWG1002096	
Bromochloroacetic Acid	ND	U	0.99	0.15	1	03/12/10	03/13/10	KWG1002096	
Dibromoacetic Acid	**0.43**	JP	0.99	0.14	1	03/12/10	03/13/10	KWG1002096	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	119	70-130	03/13/10	Acceptable

Comments:

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Collected:**	NA
Sample Matrix:	Drinking water	**Date Received:**	NA

Haloacetic Acids by EPA MEthod 552.2

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1002096-5	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Chloroacetic Acid	ND	U	2.0	0.16	1	03/12/10	03/12/10	KWG1002096	
Bromoacetic Acid	ND	U	1.0	0.13	1	03/12/10	03/12/10	KWG1002096	
Dichloroacetic Acid	ND	U	1.0	0.18	1	03/12/10	03/12/10	KWG1002096	
Trichloroacetic Acid	ND	U	1.0	0.33	1	03/12/10	03/12/10	KWG1002096	
Bromochloroacetic Acid	ND	U	1.0	0.15	1	03/12/10	03/12/10	KWG1002096	
Dibromoacetic Acid	ND	U	1.0	0.14	1	03/12/10	03/12/10	KWG1002096	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2,3-Dibromopropionic Acid	92	70-130	03/12/10	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: Curtis & Tompkins, Ltd.
Project: Recycled Water Study/218531
Sample Matrix: Drinking water

Service Request: K1001987

Surrogate Recovery Summary
Haloacetic Acids by EPA MEthod 552.2

Extraction Method: METHOD
Analysis Method: 552.2

Units: ug/L
Level: Low

Sample Name	Lab Code	Sur1
MW-1	K1001987-001	108
MW-2	K1001987-002	105
MW-3	K1001987-003	97
MW-4	K1001987-004	100
SOURCE	K1001987-005	128
L5 COMP	K1001987-006	110
L10 COMP	K1001987-007	101
5042	K1001987-008	95
5043	K1001987-009	119
Method Blank	KWG1002096-5	92
Batch QC	K1002197-001	93
Batch QC	K1002207-001	106
Batch QCMS	KWG1002096-1	98
Batch QCMS	KWG1002096-2	109
Lab Control Sample	KWG1002096-3	109
Lab Control Sample	KWG1002096-4	102

Surrogate Recovery Control Limits (%)

Sur1 = 2,3-Dibromopropionic Acid 70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Extracted:**	03/12/2010
Sample Matrix:	Drinking water	**Date Analyzed:**	03/13/2010

Matrix Spike Summary
Haloacetic Acids by EPA MEthod 552.2

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1002197-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2	**Extraction Lot:**	KWG1002096

		Batch QCMS KWG1002096-1 **Matrix Spike**			
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Chloroacetic Acid	0.93	5.64	4.99	94	70-130
Bromoacetic Acid	0.13	6.15	4.99	121	70-130
Dichloroacetic Acid	2.1	7.49	4.99	109	70-130
Trichloroacetic Acid	0.74	5.92	4.99	104	70-130
Bromochloroacetic Acid	0.40	5.37	4.99	100	70-130
Dibromoacetic Acid	0.49	5.31	4.99	97	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Extracted:**	03/12/2010
Sample Matrix:	Drinking water	**Date Analyzed:**	03/13/2010

Matrix Spike Summary
Haloacetic Acids by EPA MEthod 552.2

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1002207-001	**Basis:**	NA
Extraction Method:	METHOD	**Level:**	Low
Analysis Method:	552.2	**Extraction Lot:**	KWG1002096

		Batch QCMS KWG1002096-2 **Matrix Spike**			
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Chloroacetic Acid	0.42	5.10	4.98	94	70-130
Bromoacetic Acid	ND	5.67	4.98	114	70-130
Dichloroacetic Acid	2.5	7.37	4.98	97	70-130
Trichloroacetic Acid	20	25.9	4.98	120 #	70-130
Bromochloroacetic Acid	ND	5.54	4.98	111	70-130
Dibromoacetic Acid	ND	5.11	4.98	103	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Extracted:**	03/12/2010
Sample Matrix:	Drinking water	**Date Analyzed:**	03/12/2010

Lab Control Spike Summary
Haloacetic Acids by EPA MEthod 552.2

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	552.2	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1002096

	Lab Control Sample KWG1002096-3 **Lab Control Spike**			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Chloroacetic Acid	5.21	5.00	104	70-130
Bromoacetic Acid	5.11	5.00	102	70-130
Dichloroacetic Acid	4.94	5.00	99	70-130
Trichloroacetic Acid	5.34	5.00	107	70-130
Bromochloroacetic Acid	5.34	5.00	107	70-130
Dibromoacetic Acid	5.18	5.00	104	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Curtis & Tompkins, Ltd.	**Service Request:**	K1001987
Project:	Recycled Water Study/218531	**Date Extracted:**	03/12/2010
Sample Matrix:	Drinking water	**Date Analyzed:**	03/12/2010

Lab Control Spike Summary
Haloacetic Acids by EPA MEthod 552.2

Extraction Method:	METHOD	**Units:**	ug/L
Analysis Method:	552.2	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1002096

	Lab Control Sample KWG1002096-4 **Lab Control Spike**			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Chloroacetic Acid	5.84	5.00	117	70-130
Bromoacetic Acid	4.65	5.00	93	70-130
Dichloroacetic Acid	4.91	5.00	98	70-130
Trichloroacetic Acid	5.27	5.00	105	70-130
Bromochloroacetic Acid	5.50	5.00	110	70-130
Dibromoacetic Acid	5.24	5.00	105	70-130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878
2323 Fifth Street
Berkeley, CA 94710
(510) 486-0900
(510) 486-0532

K1001987

Project Number: 218531
Site: Recycled Water Study

Subcontract Laboratory:
Columbia Analytical Services
1317 South 13th Ave
Kelso, WA 98626
(360) 577-7222
ATTN: Pradeep Divvela

Results due: Report Level: II

Please send report to: Micah Smith (micah.smith@ctberk.com)
*** Please report using Sample ID rather than C&T Lab #.

Sample ID	Sampled	Matrix	Analysis	C&T Lab #	Comments
MW-1	03/01 09:15	Water	552	218531-001	HAA6 FULL LIST+BROMOCHLOROACETIC ACID
MW-2	03/01 10:20	Water	552	218531-002	HAA6 FULL LIST+BROMOCHLOROACETIC ACID
MW-3	03/01 12:05	Water	552	218531-003	HAA6 FULL LIST+BROMOCHLOROACETIC ACID
MW-4	03/01 11:15	Water	552	218531-004	HAA6 FULL LIST+BROMOCHLOROACETIC ACID
SOURCE	03/01 09:15	Water	552	218531-005	HAA6 FULL LIST+BROMOCHLOROACETIC ACID
L5 COMP	03/01 00:00	Water	552	218531-006	HAA6 FULL LIST+BROMOCHLOROACETIC ACID; LIMITED SAMPLES!!!!!!!!!
L10 COMP	03/01 00:00	Water	552	218531-007	HAA6 FULL LIST+BROMOCHLOROACETIC ACID; LIMITED SAMPLES!!!!!!!!!
5042	03/01 00:00	Water	552	218531-008	HAA6 FULL LIST+BROMOCHLOROACETIC ACID; LIMITED SAMPLES!!!!!!!!!
5043	03/01 00:00	Water	552	218531-009	HAA6 FULL LIST+BROMOCHLOROACETIC ACID

Notes:	Relinquished By:	Received By:
		Jones
	Date/Time: 3-2-10 1530	Date/Time: 3/4/10 1415

Signature on this form constitutes a firm Purchase Order for the services requested above.

Columbia Analytical Services, Inc.
Cooler Receipt and Preservation Form

PC [illegible]

Client / Project: Curtis and Tompkins Service Request **K10** 01987

Received: 3/4/10 Opened: 3/4/10 By: John

1. Samples were received via? *Mail* *Fed Ex* *UPS* *DHL* *PDX* [✓ *Courier*] Cal Overnight *Hand Delivered*
2. Samples were received in: (circle) [✓ *Cooler*] *Box* *Envelope* *Other*______ *NA*
3. Were custody seals on coolers? NA Y [✓ N] If yes, how many and where?______

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Cooler Temp °C	Temp Blank °C	Thermometer ID	Cooler/COC ID [✓ NA]	Tracking Number NA	Filed
-0.6	—	276		C10947200003901	

7. Packing material used. *Inserts* [✓ *Baggies*] [✓ *Bubble Wrap*] *Gel Packs* [✓ *Wet Ice*] *Sleeves* *Other*______
8. Were custody papers properly filled out (ink, signed, etc.)? NA [✓ Y] N
9. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA [✓ Y] N
10. Were all sample labels complete (i.e analysis, preservation, etc.)? NA [✓ Y] N
11. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA [✓ Y] N
12. Were appropriate bottles/containers and volumes received for the tests indicated? NA [✓ Y] N
13. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* [✓ NA] Y N
14. Were VOA vials received without headspace? *Indicate in the table below.* [✓ NA] Y N
15. Was C12/Res negative? [✓ NA] Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

*Notes, Discrepancies, & Resolutions:*______

Page 1 *of*____

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 631523

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
MPN-Standard Bacteria: 03-08-2010

Service SOPs: MPN-Standard Bacteria (100130)

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Receipt: 03-01-2010
Date of Report: 03-08-2010

MPN REPORT

Location: MW-1 Lab ID-Version‡: 2797266-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	03/01/10 14:30	< 2	-	14
Total Coliform	SM 9221 B	03/01/10 14:30	14	5	40
E. coli	SM 9221 F	03/01/10 14:30	< 2	-	14

Comments:

Location: MW-2 Lab ID-Version‡: 2797268-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	03/01/10 14:30	< 2	-	14
Total Coliform	SM 9221 B	03/01/10 14:30	< 2	-	14
E. coli	SM 9221 F	03/01/10 14:30	< 2	-	14

Comments:

Location: MW-3 Lab ID-Version‡: 2797270-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	03/01/10 14:30	< 2	-	14
Total Coliform	SM 9221 B	03/01/10 14:30	2	0.01	14
E. coli	SM 9221 F	03/01/10 14:30	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.
**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Receipt: 03-01-2010
Date of Report: 03-08-2010

MPN REPORT

Location: MW-4
Lab ID-Version‡: 2797272-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	03/01/10 14:30	< 2	-	14
Total Coliform	SM 9221 B	03/01/10 14:30	< 2	-	14
E. coli	SM 9221 F	03/01/10 14:30	< 2	-	14

Comments:

Location: L5-Comp
Lab ID-Version‡: 2797274-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	03/01/10 14:30	< 2	-	14
Total Coliform	SM 9221 B	03/01/10 14:30	54	16	180
E. coli	SM 9221 F	03/01/10 14:30	< 2	-	14

Comments:

Location: L10-Comp
Lab ID-Version‡: 2797276-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	03/01/10 14:30	< 2	-	14
Total Coliform	SM 9221 B	03/01/10 14:30	4	1	16
E. coli	SM 9221 F	03/01/10 14:30	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.
**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Receipt: 03-01-2010
Date of Report: 03-08-2010

MPN REPORT

Location: Source
Lab ID-Version‡: 2797278-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	03/01/10 14:30	< 2	-	14
Total Coliform	SM 9221 B	03/01/10 14:30	< 2	-	14
E. coli	SM 9221 F	03/01/10 14:30	< 2	-	14

Comments:

Location: 5042
Lab ID-Version‡: 2797280-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	03/01/10 14:30	< 2	-	14
Total Coliform	SM 9221 B	03/01/10 14:30	< 2	-	14
E. coli	SM 9221 F	03/01/10 14:30	< 2	-	14

Comments:

Location: 5043
Lab ID-Version‡: 2797282-1

Sample size: 100		Unit: 100 ml		Percent solid: N/A	
Bacteria	**Method**	**Setup Time**	**MPN*/Unit**	**LCL****	**UCL****
Fecal Coliform	SM 9221 E	03/01/10 14:30	< 2	-	14
Total Coliform	SM 9221 B	03/01/10 14:30	< 2	-	14
E. coli	SM 9221 F	03/01/10 14:30	< 2	-	14

Comments:

*MPN - Most Probable Number.
MPN methods:
SM - Standard Methods for the Examination of Waters and Wastewaters, 20th ed. 1998.
FDA BAM - U.S. Food and Drug Administration Bacteriological Analytical Manual, January 2001.
MPN values are calculated using the method of Thomas (1942).
The MPN method was developed to handle samples with a high load of particulate matter, such as turbid waters, soils, wastewaters and sludges. MPN values are statistically derived calculations of viable bacterial density based on the assumptions of random distribution of single, non-clustered, bacteria not attached to particulate matter within a sample. Due to the fact that bacteria can cluster and adhere to materials, values determined by the MPN method should be considered estimates in many instances.
**The Upper 95% Confidence Limit (UCL) and Lower 95% Confidence Limit (LCL) are calculated using the method of deMan (1983) and represent that "before the tubes are inoculated, the chance is at least 95 percent that the confidence interval associated with the eventual result will enclose the actual concentration" (FDA BAM).
Interpretation is left to the company and/or persons who conducted the field work.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

EMLab P&K

Report for:

Mr. Norman Wong
Locus Technologies
299 Fairchild Dr
Mt View, CA 94043

Regarding: Project: 27011-07-4200; Recycled Water Study
EML ID: 631523

Approved by:

Lab Manager
Dr. Kamashwaran Ramanathan

Dates of Analysis:
Heterotrophic plate count: 03-04-2010

For clarity, we report the number of significant digits as calculated; but, due to the nature of this type of biological data, the number of significant digits that is used for interpretation should generally be one or two. All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. Due to the nature of the analyses performed, field blank corrections of results is not a standard practice. The results relate only to the items tested.

EMLab P&K ("the Company") shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Document Number: 200091 - Revision Number: 5

EMLab P&K
1150 Bayhill Drive, Suite 100, San Bruno, CA 94066
(866) 888-6653 Fax (650) 829-5852 www.emlab.com

Client: Locus Technologies
C/O: Mr. Norman Wong
Re: 27011-07-4200; Recycled Water Study

Date of Receipt: 03-01-2010
Date of Report: 03-04-2010

HETEROTROPHIC PLATE COUNT REPORT

Location:	MW-1	MW-2	MW-3
Comments (see below)	None	None	None
Lab ID-Version‡:	2797267-1	2797269-1	2797271-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	03/01/2010 at 02:00 PM	03/01/2010 at 02:00 PM	03/01/2010 at 02:00 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	1,700	2,900	1,900
Read Time	03/03/2010 at 02:00 PM	03/03/2010 at 02:00 PM	03/03/2010 at 02:00 PM

Comments:

Location:	MW-4	L5-Comp	L10-Comp
Comments (see below)	None	None	None
Lab ID-Version‡:	2797273-1	2797275-1	2797277-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:10	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	03/01/2010 at 02:00 PM	03/01/2010 at 02:00 PM	03/01/2010 at 02:00 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	660	3,100	1,600
Read Time	03/03/2010 at 02:00 PM	03/03/2010 at 02:00 PM	03/03/2010 at 02:00 PM

Comments:

Location:	Source	5042	5043
Comments (see below)	None	None	None
Lab ID-Version‡:	2797279-1	2797281-1	2797283-1
Sample Type	Water sample	Water sample	Water sample
Method	Pour Plate: SM 9215B	Pour Plate: SM 9215B	Pour Plate: SM 9215B
Dilution	Plate Count Agar 1:1	Plate Count Agar 1:10	Plate Count Agar 1:10
Setup Time	03/01/2010 at 02:00 PM	03/01/2010 at 02:00 PM	03/01/2010 at 02:00 PM
Incubation Info	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C	48 hrs at 35 +- 0.5C
Reporting Unit	1 ml	1 ml	1 ml
CFU/Reporting Unit	< 1	980	1,000
Read Time	03/03/2010 at 02:00 PM	03/03/2010 at 02:00 PM	03/03/2010 at 02:00 PM

Comments:

* Estimated result

‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
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Laboratory Report

for

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attention: Norman Wong
Fax: 650-960-0739

Date of Issue
04/02/2010
Yolanda Martin
MWH LABORATORIES

01114CA

YOM: Yolanda.O.Martin

Project Manager

Report#: 327287
Project:
RECYCLED-WATER-STUDY
Group: Chemistry
PO#: B30-12470

Laboratory certifies that the test results meet all **NELAC** requirements unless noted in the Comments section or the Case Narrative. Following the cover page are Hits Reports, Comments, QC Summary, QC Report and Regulatory Forms. This report shall not be reproduced except in full, without the written approval of the laboratory.

MWH Laboratories

750 Royal Oaks Drive Suite 100, Monrovia, Ca 91016
Phone 626-386-1100/Fax: 626-386-1101

Acknowledgement of Samples Received

Locus Technologies
299 Fairchild Drive
Mountain View, CA 94043
Attn: Norman Wong
Phone: 650-641-8258

Customer Code: LOCUS-MTNVIEW
Group #: 327287
Project #: RECYCLED-WATER-STUDY
Sample Group: Chemistry
Project Manager: Yolanda.O.Martin
Phone: 626-386-1104
PO #: B30-12470

The following samples were received from you on **March 02, 2010**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using MWH Laboratories.

Sample #	Sample Id	Sample Date
201003020301	MW-1	01-Mar-2010 09:15
	@NDMA_SPE @PFC	
201003020302	MW-2	01-Mar-2010 10:20
	@NDMA_SPE @PFC	
201003020303	MW-3	01-Mar-2010 12:05
	@NDMA_SPE @PFC	
201003020304	MW-4	01-Mar-2010 11:15
	@NDMA_SPE @PFC	
201003020305	Source	01-Mar-2010 09:15
Sample Type: SOURCE		
	@525PLUS @NDMA_SPE @PFC EDTA	
201003020308	L-5 Composite	01-Mar-2010 0000
	@NDMA_SPE @PFC	
201003020309	L-10 Composite	01-Mar-2010 0000
	@NDMA_SPE @PFC	
201003020311	5042	01-Mar-2010 0000
	@NDMA_SPE @PFC	
201003020321	5043	01-Mar-2010 0000
	@NDMA_SPE @PFC	

Test Description

@525PLUS -- Semivolatiles by GCMS
@NDMA_SPE -- Nitrosamines by GCMS
@PFC -- Perfluorinated compounds

MWH Laboratories
MONTGOMERY WATSON HARZA

CHAIN OF CUSTODY RECORD

ENTERED 327287

750 Royal Oaks, Suite 100
Monrovia, California 91016
Phone: (626) 386-1100
(800) 566-5227
Fax: (626) 386-1101

MWH LABS USE ONLY:

LOGIN COMMENTS: ____

SAMPLES CHECKED AGAINST COC BY: RSR

SAMPLES LOGGED IN BY: RSR

SAMPLE TEMP WHEN REC'D AT LAB: 4°C (Compliance: 6°C or Below)

CONDITION OF BLUE ICE: FROZEN X PARTIALLY FROZEN ___ THAWED ___ (check for yes)

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes) (check for yes)

TO BE COMPLETED BY SAMPLER:

COMPANY, UTILITY or PROJECT: Locus Technologies

SYSTEM #:

COMPLIANCE SAMPLES ☐ - Requires state forms ☐

NON-COMPLIANCE SAMPLES ☐

REGULATION INVOLVED: (eg. SDWA, Phase V, NPDES, FDA,...)

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION

MWH LABS CLIENT CODE: locus

P.O.# / JOB # / PROJECT : 27011-07-7000

SEE ATTACHED BOTTLE ORDER FOR ANALYSES ☐ (check for yes), OR

LIST ANALYSES REQUIRED BELOW (enter number of bottles sent for each test for each sample):

SAMPLER PRINTED NAME AND SIGNATURE: H. Castro / T. Murphy

TAT requested: rush by adv notice only

STD X 1 week ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	STATION # or LOCATION	SITE NAME OR SAMPLE I.D.	MATRIX *	GRAB	COMP	NDMA	PFCs	EDTA	EPA525+							SAMPLER COMMENTS
3-1-10		LS comp	IDT	RGW		X	1	1	0	0							
		L10 comp				X	1	1	0	0							
	9:15	MW-1			X		2	1	0	0							
	10:20	MW-2			X		2	1	0	0							
	12:05	MW-3			X		2	1	0	0							
	11:15	MW-4			X		2	1	0	0							
	9:15	Source			X		2	1	1	2							
		5042			X		1	1	0	0							
		5043			X		2	1	0	0							

3/28

* MATRIX TYPES:
RSW = Raw Surface Water
RGW = Raw Ground Water
CFW = Chlor(am)inated Finished Water
FW = Other Finished Water
CWW = Chlorinated Waste Water
WW = Other Waste Water
BW = Bottled Water
SW = Storm Water
SO = Soil
SL = Sludge

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RELINQUISHED BY:		Henry Castro Jr	Locus Tech.	3-2-10	1250
RECEIVED BY:		Angel Cardona	MWH / Redline Curier Svc	3-2-10	12:50
RELINQUISHED BY:		RITA REEVES	MWH	3/2/10	16:15
RECEIVED BY:		M. DEMESA	MWH	3-3-10	0830
RELINQUISHED BY:					
RECEIVED BY:					

C-O-C# ____

PAGE ____ OF ____

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750 Royal Oak Dr., Suite 100
Monrovia, California, 91016-3629
Tel: 626 386 1100
Fax: 626 386 1101
1 800 566 LABS (1 800 566 5227)

Laboratory
Hits Report: 327287

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
03/02/2010

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	201003020301	**MW-1**				
03/09/2010 16:23	N-Nitroso-dimethylamine (NDMA)		4.1		ng/L	2
	201003020302	**MW-2**				
03/09/2010 17:07	N-Nitroso-dimethylamine (NDMA)		4.1		ng/L	2
	201003020304	**MW-4**				
03/09/2010 18:35	N-Nitroso-dimethylamine (NDMA)		3.4		ng/L	2
	201003020305	**Source**				
03/10/2010 16:15	N-Nitroso-dimethylamine (NDMA)		320		ng/L	10
03/04/2010 12:15	Perfluoro butanoic acid- PFBA		12		ng/L	10
03/04/2010 12:15	Perfluoro octanesulfonic-PFOS		51		ng/L	5
03/04/2010 12:15	Perfluoro octanoic acid - PFOA		70		ng/L	5
	201003020321	**5043**				
03/10/2010 18:27	N-Nitroso-dimethylamine (NDMA)		330		ng/L	10
03/04/2010 12:50	Perfluoro octanesulfonic-PFOS		46		ng/L	5
03/04/2010 12:50	Perfluoro octanoic acid - PFOA		62		ng/L	5

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
03/02/2010

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
MW-1 (201003020301)						**Sampled on**	**03/01/2010 09:15**	
			EPA 521 - Nitrosamines by GCMS					
3/5/2010	03/09/2010 16:23	544951	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	4.1	ng/L	2	1
3/5/2010	03/09/2010 16:23	544951	(EPA 521)	NDMA-D6	86	%		1
			MWH PFC - Perfluorinated compounds					
	03/04/2010 11:52	545145	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	10	1
	03/04/2010 11:52	545145	(MWH PFC)	Perfluoro octanesulfonic-PFOS	ND	ng/L	5	1
	03/04/2010 11:52	545145	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	03/04/2010 11:52	545145	(MWH PFC)	PFBA-C13	95	%		1
	03/04/2010 11:52	545145	(MWH PFC)	PFOA-C13	92	%		1
	03/04/2010 11:52	545145	(MWH PFC)	PFOS-C13	53	%		1
MW-2 (201003020302)						**Sampled on**	**03/01/2010 10:20**	
			EPA 521 - Nitrosamines by GCMS					
3/5/2010	03/09/2010 17:07	544951	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	4.1	ng/L	2	1
3/5/2010	03/09/2010 17:07	544951	(EPA 521)	NDMA-D6	85	%		1
			MWH PFC - Perfluorinated compounds					
	03/04/2010 12:04	545145	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	10	1
	03/04/2010 12:04	545145	(MWH PFC)	Perfluoro octanesulfonic-PFOS	ND	ng/L	5	1
	03/04/2010 12:04	545145	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	03/04/2010 12:04	545145	(MWH PFC)	PFBA-C13	98	%		1
	03/04/2010 12:04	545145	(MWH PFC)	PFOA-C13	105	%		1
	03/04/2010 12:04	545145	(MWH PFC)	PFOS-C13	67	%		1
MW-3 (201003020303)						**Sampled on**	**03/01/2010 12:05**	
			EPA 521 - Nitrosamines by GCMS					
3/5/2010	03/09/2010 17:51	544951	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
3/5/2010	03/09/2010 17:51	544951	(EPA 521)	NDMA-D6	96	%		1
			MWH PFC - Perfluorinated compounds					
	03/04/2010 11:41	545145	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	10	1
	03/04/2010 11:41	545145	(MWH PFC)	Perfluoro octanesulfonic-PFOS	ND	ng/L	5	1
	03/04/2010 11:41	545145	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	03/04/2010 11:41	545145	(MWH PFC)	PFBA-C13	94	%		1
	03/04/2010 11:41	545145	(MWH PFC)	PFOA-C13	97	%		1

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	03/04/2010 11:41	545145	(MWH PFC)	PFOS-C13	57	%		1

MW-4 (201003020304) **Sampled on 03/01/2010 11:15**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
3/5/2010	03/09/2010 18:35	544951	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	3.4	ng/L	2	1
3/5/2010	03/09/2010 18:35	544951	(EPA 521)	NDMA-D6	86	%		1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	03/03/2010 16:12	544781	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	10	1
	03/03/2010 16:12	544781	(MWH PFC)	Perfluoro octanesulfonic-PFOS	ND	ng/L	5	1
	03/03/2010 16:12	544781	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	03/03/2010 16:12	544781	(MWH PFC)	PFBA-C13	91	%		1
	03/03/2010 16:12	544781	(MWH PFC)	PFOA-C13	92	%		1
	03/03/2010 16:12	544781	(MWH PFC)	PFOS-C13	66	%		1

Source (201003020305) **Sampled on 03/01/2010 09:15**

`Sample Type: SOURCE`

EPA 525.2 - Semivolatiles by GCMS

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.1	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.1	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	4,4-DDD	ND	ug/L	0.1	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	4,4-DDE	ND	ug/L	0.1	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	4,4-DDT	ND	ug/L	0.1	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Acenaphthene	ND	ug/L	0.1	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.1	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Acetochlor	ND	ug/L	0.1	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Alachlor	ND	ug/L	0.05	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Aldrin	ND	ug/L	0.05	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.1	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.05	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Anthracene	ND	ug/L	0.02	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Atrazine	ND	ug/L	0.05	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.05	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.02	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.02	1
3/5/2010	03/11/2010 16:44	545518	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.05	1

MWH LABORATORIES
A Division of MWH Americas, Inc.

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1 800 566 LABS (1 800 566 5227)

Laboratory Data
Report: 327287

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Samples Received on:
03/02/2010

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.02	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Beta-BHC	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Bromacil	ND	ug/L	0.2	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Butachlor	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.5	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Chloroneb	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Chrysene	ND	ug/L	0.02	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Delta-BHC	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND (LK)	ug/L	0.6	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.6	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Dieldrin	ND	ug/L	0.2	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.5	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Dimethoate	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.5	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Endrin	ND	ug/L	0.2	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	EPTC	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Fluoranthene	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Fluorene	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Heptachlor	ND	ug/L	0.03	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.05	1

Locus Technologies
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Samples Received on:
03/02/2010

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Isophorone	ND	ug/L	0.5	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Lindane	ND	ug/L	0.04	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Malathion	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Methoxychlor	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Metolachlor	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Metribuzin	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Molinate	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Naphthalene	ND	ug/L	0.3	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Parathion	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Pendimethalin	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Pentachlorophenol	ND	ug/L	1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Phenanthrene	ND	ug/L	0.04	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Propachlor	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Pyrene	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Simazine	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Terbacil	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.2	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.05	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Trifluralin	ND	ug/L	0.1	1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	98	%		1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Acenaphthene-d10	71	%		1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Chrysene-d12	76	%		1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Perylene-d12	100	%		1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Phenanthrene-d10	73	%		1
3/5/2010	03/11/2010	16:44	545518	(EPA 525.2)	Triphenylphosphate	111	%		1

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
3/5/2010	03/10/2010	16:15	545121	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	320	ng/L	10	5
3/5/2010	03/10/2010	16:15	545121	(EPA 521)	NDMA-D6	79	%		1

MWH_MET - NTA and EDTA by Ion Chromatography

Locus Technologies
Norman Wong
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Samples Received on:
03/02/2010

Prepared	Analyzed	QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	03/11/2010 21:14	545641	(MWH_MET)	EDTA	ND	mg/L	0.1	1
	MWH PFC - Perfluorinated compounds							
	03/04/2010 12:15	545145	(MWH PFC)	Perfluoro butanoic acid- PFBA	12	ng/L	10	1
	03/04/2010 12:15	545145	(MWH PFC)	Perfluoro octanesulfonic-PFOS	51	ng/L	5	1
	03/04/2010 12:15	545145	(MWH PFC)	Perfluoro octanoic acid - PFOA	70	ng/L	5	1
	03/04/2010 12:15	545145	(MWH PFC)	PFBA-C13	99	%		1
	03/04/2010 12:15	545145	(MWH PFC)	PFOA-C13	102	%		1
	03/04/2010 12:15	545145	(MWH PFC)	PFOS-C13	51	%		1
L-5 Composite (201003020308)						**Sampled on**	**03/01/2010 0000**	
	EPA 521 - Nitrosamines by GCMS							
3/5/2010	03/10/2010 17:43	545121	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
3/5/2010	03/10/2010 17:43	545121	(EPA 521)	NDMA-D6	70	%		1
	MWH PFC - Perfluorinated compounds							
	03/04/2010 12:27	545145	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	10	1
	03/04/2010 12:27	545145	(MWH PFC)	Perfluoro octanesulfonic-PFOS	ND	ng/L	5	1
	03/04/2010 12:27	545145	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	03/04/2010 12:27	545145	(MWH PFC)	PFBA-C13	96	%		1
	03/04/2010 12:27	545145	(MWH PFC)	PFOA-C13	108	%		1
	03/04/2010 12:27	545145	(MWH PFC)	PFOS-C13	59	%		1
L-10 Composite (201003020309)						**Sampled on**	**03/01/2010 0000**	
	EPA 521 - Nitrosamines by GCMS							
3/5/2010	03/09/2010 20:47	544951	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
3/5/2010	03/09/2010 20:47	544951	(EPA 521)	NDMA-D6	89	%		1
	MWH PFC - Perfluorinated compounds							
	03/04/2010 12:38	545145	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	10	1
	03/04/2010 12:38	545145	(MWH PFC)	Perfluoro octanesulfonic-PFOS	ND	ng/L	5	1
	03/04/2010 12:38	545145	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	03/04/2010 12:38	545145	(MWH PFC)	PFBA-C13	96	%		1
	03/04/2010 12:38	545145	(MWH PFC)	PFOA-C13	102	%		1
	03/04/2010 12:38	545145	(MWH PFC)	PFOS-C13	57	%		1
5042 (201003020311)						**Sampled on**	**03/01/2010 0000**	
	EPA 521 - Nitrosamines by GCMS							

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Laboratory Data
Report: 327287

Locus Technologies
Norman Wong
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Samples Received on:
03/02/2010

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
3/5/2010	03/09/2010	21:31	544951	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	ND	ng/L	2	1
3/5/2010	03/09/2010	21:31	544951	(EPA 521)	NDMA-D6	85	%		1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	03/03/2010	16:58	544781	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	10	1
	03/03/2010	16:58	544781	(MWH PFC)	Perfluoro octanesulfonic-PFOS	ND	ng/L	5	1
	03/03/2010	16:58	544781	(MWH PFC)	Perfluoro octanoic acid - PFOA	ND	ng/L	5	1
	03/03/2010	16:58	544781	(MWH PFC)	PFBA-C13	92	%		1
	03/03/2010	16:58	544781	(MWH PFC)	PFOA-C13	89	%		1
	03/03/2010	16:58	544781	(MWH PFC)	PFOS-C13	96	%		1

5043 (201003020321) **Sampled on 03/01/2010 0000**

EPA 521 - Nitrosamines by GCMS

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	03/10/2010	18:27	545121	(EPA 521)	N-Nitroso-dimethylamine (NDMA)	330	ng/L	10	5
3/5/2010	03/09/2010	22:15	544951	(EPA 521)	NDMA-D6	78	%		1

MWH PFC - Perfluorinated compounds

Prepared	Analyzed		QC Ref #	Method	Analyte	Result	Units	MRL	Dilution
	03/04/2010	12:50	545145	(MWH PFC)	Perfluoro butanoic acid- PFBA	ND	ng/L	10	1
	03/04/2010	12:50	545145	(MWH PFC)	Perfluoro octanesulfonic-PFOS	46	ng/L	5	1
	03/04/2010	12:50	545145	(MWH PFC)	Perfluoro octanoic acid - PFOA	62	ng/L	5	1
	03/04/2010	12:50	545145	(MWH PFC)	PFBA-C13	96	%		1
	03/04/2010	12:50	545145	(MWH PFC)	PFOA-C13	110	%		1
	03/04/2010	12:50	545145	(MWH PFC)	PFOS-C13	50	%		1

MWH
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Laboratory Comments
Report: #327287

Locus Technologies
Norman Wong
299 Fairchild Drive
Mountain View, CA 94043

Flags Legend:

LK - The associated blank spike recovery was above method acceptance limits. This target analyte was not detected in the sample.

The Comments Report may be blank if there are no comments for this report.

QC Ref # 544781 - Perfluorinated compounds **Analysis Date: 03/03/2010**

201003020304	MW-4	Analyzed by: LHZ
201003020311	5042	Analyzed by: LHZ

QC Ref # 544951 - Nitrosamines by GCMS **Analysis Date: 03/09/2010**

201003020301	MW-1	Analyzed by: KAM
201003020302	MW-2	Analyzed by: KAM
201003020303	MW-3	Analyzed by: KAM
201003020304	MW-4	Analyzed by: KAM
201003020309	L-10 Composite	Analyzed by: KAM
201003020311	5042	Analyzed by: KAM
201003020321	5043	Analyzed by: KAM

QC Ref # 545121 - Nitrosamines by GCMS **Analysis Date: 03/10/2010**

201003020305	Source	Analyzed by: KAM
201003020308	L-5 Composite	Analyzed by: KAM
201003020321	5043	Analyzed by: KAM

QC Ref # 545145 - Perfluorinated compounds **Analysis Date: 03/04/2010**

201003020301	MW-1	Analyzed by: LHZ
201003020302	MW-2	Analyzed by: LHZ
201003020303	MW-3	Analyzed by: LHZ
201003020305	Source	Analyzed by: LHZ
201003020308	L-5 Composite	Analyzed by: LHZ
201003020309	L-10 Composite	Analyzed by: LHZ
201003020321	5043	Analyzed by: LHZ

QC Ref # 545518 - Semivolatiles by GCMS **Analysis Date: 03/11/2010**

201003020305	Source	Analyzed by: JWC

QC Ref # 545641 - NTA and EDTA by Ion Chromatography **Analysis Date: 03/11/2010**

201003020305	Source	Analyzed by: DYM

QC Ref# 544781 - Perfluorinated compounds by MWH PFC **Analysis Date: 03/03/2010**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS3	Perfluoro butanoic acid- PFBA		50	42.4	ng/l	85	(70-130)		
LCS4	Perfluoro butanoic acid- PFBA		50	40.4	ng/l	81	(70-130)	20	4.8
MBLK	Perfluoro butanoic acid- PFBA			<10	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		5.0	4.04	ng/L	81	(50-150)		
MS1_201003020303	Perfluoro butanoic acid- PFBA		50	40.3	ng/l	81	(70-130)		
MSD1_201003020303	Perfluoro butanoic acid- PFBA		50	41.7	ng/l	83	(70-130)	30	3.4
LCS3	Perfluoro octanesulfonate-PFOS		50	52.4	ng/l	105	(70-130)		
LCS4	Perfluoro octanesulfonate-PFOS		50	51.0	ng/l	102	(70-130)	20	2.7
MBLK	Perfluoro octanesulfonate-PFOS			<5	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		4.8	4.87	ng/L	102	(50-150)		
MS1_201003020303	Perfluoro octanesulfonate-PFOS		50	55.1	ng/l	108	(70-130)		
MSD1_201003020303	Perfluoro octanesulfonate-PFOS		50	52.0	ng/l	102	(70-130)	30	5.7
LCS3	Perfluoro octanoic acid - PFOA		50	56.7	ng/l	113	(70-130)		
LCS4	Perfluoro octanoic acid - PFOA		50	51.4	ng/l	103	(70-130)	20	9.8
MBLK	Perfluoro octanoic acid - PFOA			<5	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	3.79	ng/L	76	(50-150)		
MS1_201003020303	Perfluoro octanoic acid - PFOA		50	54.3	ng/l	109	(70-130)		
MSD1_201003020303	Perfluoro octanoic acid - PFOA		50	51.8	ng/l	104	(70-130)	30	4.7
LCS3	PFBA-C13 (I)			105	%	105	(50-150)		
LCS4	PFBA-C13 (I)			103	%	103	(50-150)		
MBLK	PFBA-C13 (I)			101	%	101	(50-150)		
MRL_CHK	PFBA-C13 (I)			102	%	102	(50-150)		
MS1_201003020303	PFBA-C13 (I)			88.3	%	88	(50-150)		
MSD1_201003020303	PFBA-C13 (I)			86.3	%	86	(50-150)		
LCS3	PFOA-C13 (I)			101	%	101	(50-150)		
LCS4	PFOA-C13 (I)			106	%	106	(50-150)		
MBLK	PFOA-C13 (I)			94.8	%	95	(50-150)		
MRL_CHK	PFOA-C13 (I)			97.9	%	98	(50-150)		
MS1_201003020303	PFOA-C13 (I)			88.6	%	89	(50-150)		
MSD1_201003020303	PFOA-C13 (I)			83.2	%	83	(50-150)		
LCS3	PFOS-C13 (I)			98.4	%	98	(50-150)		
LCS4	PFOS-C13 (I)			107	%	107	(50-150)		
MBLK	PFOS-C13 (I)			97.1	%	97	(50-150)		
MRL_CHK	PFOS-C13 (I)			105	%	105	(50-150)		
MS1_201003020303	PFOS-C13 (I)			60.2	%	60	(50-150)		
MSD1_201003020303	PFOS-C13 (I)			51.1	%	51	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Ref# 544951 - Nitrosamines by GCMS by EPA 521 **Analysis Date: 03/09/2010**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS3	N-Nitroso dimethylamine (NDMA)		80	57.5	ng/L	72	(70-130)		
MBLK	N-Nitroso dimethylamine (NDMA)			<2	ng/L				
MRL_CHK	N-Nitroso dimethylamine (NDMA)		2.0	1.89	ng/L	94	(50-150)		
MS2_201003030372	N-Nitroso dimethylamine (NDMA)	ND	40	32.8	ng/L	80	(70-130)		
MSD2_201003030372	N-Nitroso dimethylamine (NDMA)	ND	40	29.1	ng/l	71	(70-130)	30	12
LCS3	N-Nitrosodi-n-propylamin(NDPA)		80	62.3	ng/L	78	(70-130)		
MBLK	N-Nitrosodi-n-propylamin(NDPA)			<2	ng/L				
MRL_CHK	N-Nitrosodi-n-propylamin(NDPA)		2.0	2.36	ng/L	118	(50-150)		
MS2_201003030372	N-Nitrosodi-n-propylamin(NDPA)		40	31.9	ng/L	80	(70-130)		
MSD2_201003030372	N-Nitrosodi-n-propylamin(NDPA)		40	29.0	ng/l	73	(70-130)	30	9.4
LCS3	N-Nitrosodibutylamine (NDBA)		80	59.1	ng/L	74	(70-130)		
MBLK	N-Nitrosodibutylamine (NDBA)			<2	ng/L				
MRL_CHK	N-Nitrosodibutylamine (NDBA)		2.0	2.52	ng/L	126	(50-150)		
MS2_201003030372	N-Nitrosodibutylamine (NDBA)		40	33.4	ng/L	83	(70-130)		
MSD2_201003030372	N-Nitrosodibutylamine (NDBA)		40	30.9	ng/l	77	(70-130)	30	7.8
LCS3	N-Nitrosodiethylamine (NDEA)		80	61.7	ng/L	77	(70-130)		
MBLK	N-Nitrosodiethylamine (NDEA)			<2	ng/L				
MRL_CHK	N-Nitrosodiethylamine (NDEA)		2.0	2.62	ng/L	131	(50-150)		
MS2_201003030372	N-Nitrosodiethylamine (NDEA)		40	36.9	ng/L	92	(70-130)		
MSD2_201003030372	N-Nitrosodiethylamine (NDEA)		40	32.0	ng/L	80	(70-130)	30	14
LCS3	N-Nitrosomethylethylamin(NMEA)		80	56.3	ng/L	70	(70-130)		
MBLK	N-Nitrosomethylethylamin(NMEA)			<2	ng/L				
MRL_CHK	N-Nitrosomethylethylamin(NMEA)		2.0	1.71	ng/L	85	(50-150)		
MS2_201003030372	N-Nitrosomethylethylamin(NMEA)		40	32.3	ng/L	81	(70-130)		
MSD2_201003030372	N-Nitrosomethylethylamin(NMEA)		40	28.6	ng/L	71	(70-130)	30	12
LCS3	N-Nitrosopyrollidine (NPYR)		80	64.3	ng/L	80	(70-130)		
MBLK	N-Nitrosopyrollidine (NPYR)			<2	ng/L				
MRL_CHK	N-Nitrosopyrollidine (NPYR)		2.0	1.76	ng/L	88	(50-150)		
MS2_201003030372	N-Nitrosopyrollidine (NPYR)		40	36.7	ng/L	92	(70-130)		
MSD2_201003030372	N-Nitrosopyrollidine (NPYR)		40	33.2	ng/L	83	(70-130)	30	10
LCS3	NDMA-D6 (S)			76.0	%	76	(70-130)		
MBLK	NDMA-D6 (S)			87.4	%	87	(70-130)		
MRL_CHK	NDMA-D6 (S)			70.5	%	71	(70-130)		
MS2_201003030372	NDMA-D6 (S)			85.0	%	85	(70-130)		
MSD2_201003030372	NDMA-D6 (S)			69.4	%	**69**	(70-130)		

QC Ref# 545145 - Perfluorinated compounds by MWH PFC **Analysis Date: 03/04/2010**

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS3	Perfluoro butanoic acid- PFBA		50	46.7	ng/l	93	(70-130)		
LCS4	Perfluoro butanoic acid- PFBA		50	45.0	ng/l	90	(70-130)	20	3.7
MBLK	Perfluoro butanoic acid- PFBA			<10	ng/L				
MRL_CHK	Perfluoro butanoic acid- PFBA		5.0	5.49	ng/L	110	(50-150)		
MS1_201003020303	Perfluoro butanoic acid- PFBA	ND	50	49.7	ng/l	99	(70-130)		
MSD1_201003020303	Perfluoro butanoic acid- PFBA	ND	50	47.6	ng/l	95	(70-130)	30	4.3
LCS3	Perfluoro octanesulfonate-PFOS		50	51.1	ng/l	102	(70-130)		
LCS4	Perfluoro octanesulfonate-PFOS		50	50.5	ng/l	101	(70-130)	20	1.2
MBLK	Perfluoro octanesulfonate-PFOS			<5	ng/L				
MRL_CHK	Perfluoro octanesulfonate-PFOS		4.8	4.06	ng/L	85	(50-150)		
MS1_201003020303	Perfluoro octanesulfonate-PFOS	ND	50	52.0	ng/l	104	(70-130)		
MSD1_201003020303	Perfluoro octanesulfonate-PFOS	ND	50	51.6	ng/l	103	(70-130)	30	0.97
LCS3	Perfluoro octanoic acid - PFOA		50	53.6	ng/l	107	(70-130)		
LCS4	Perfluoro octanoic acid - PFOA		50	49.5	ng/l	99	(70-130)	20	8.0
MBLK	Perfluoro octanoic acid - PFOA			<5	ng/L				
MRL_CHK	Perfluoro octanoic acid - PFOA		5.0	4.89	ng/L	98	(50-150)		
MS1_201003020303	Perfluoro octanoic acid - PFOA	ND	50	53.9	ng/l	108	(70-130)		
MSD1_201003020303	Perfluoro octanoic acid - PFOA	ND	50	53.3	ng/l	107	(70-130)	30	0.93
LCS3	PFBA-C13 (I)			118	%	118	(50-150)		
LCS4	PFBA-C13 (I)			116	%	116	(50-150)		
MBLK	PFBA-C13 (I)			114	%	114	(50-150)		
MRL_CHK	PFBA-C13 (I)			115	%	115	(50-150)		
MS1_201003020303	PFBA-C13 (I)			92.5	%	93	(50-150)		
MSD1_201003020303	PFBA-C13 (I)			96.5	%	97	(50-150)		
LCS3	PFOA-C13 (I)			105	%	105	(50-150)		
LCS4	PFOA-C13 (I)			109	%	109	(50-150)		
MBLK	PFOA-C13 (I)			103	%	103	(50-150)		
MRL_CHK	PFOA-C13 (I)			117	%	117	(50-150)		
MS1_201003020303	PFOA-C13 (I)			102	%	102	(50-150)		
MSD1_201003020303	PFOA-C13 (I)			107	%	107	(50-150)		
LCS3	PFOS-C13 (I)			108	%	108	(50-150)		
LCS4	PFOS-C13 (I)			120	%	120	(50-150)		
MBLK	PFOS-C13 (I)			97.7	%	98	(50-150)		
MRL_CHK	PFOS-C13 (I)			117	%	117	(50-150)		
MS1_201003020303	PFOS-C13 (I)			71.0	%	71	(50-150)		
MSD1_201003020303	PFOS-C13 (I)			91.9	%	92	(50-150)		

QC Ref# 545518 - Semivolatiles by GCMS by EPA 525.2 **Analysis Date: 03/11/2010**

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	1,3-Dimethyl-2-nitrobenzene (S)			97.4	%	97	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)			97.4	%	97	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			97.5	%	98	(70-130)		
MRLHI	1,3-Dimethyl-2-nitrobenzene (S)			97.4	%	97	(70-130)		
MRLLW	1,3-Dimethyl-2-nitrobenzene (S)			98.2	%	98	(70-130)		
MRLMD	1,3-Dimethyl-2-nitrobenzene (S)			98.9	%	99	(70-130)		
MS_201003030276	1,3-Dimethyl-2-nitrobenzene (S)			95.9	%	96	(70-130)		
LCS1	2,4-Dinitrotoluene		2.0	1.82	ug/L	91	(70-130)		
LCS2	2,4-Dinitrotoluene		2.0	1.9	ug/L	95	(70-130)	20	4.3
MBLK	2,4-Dinitrotoluene			<0.05	ug/L				
MRLHI	2,4-Dinitrotoluene		0.1	0.120	ug/L	120	(50-150)		
MS_201003030276	2,4-Dinitrotoluene	ND	2.0	1.75	ug/L	88	(70-130)		
LCS1	2,6-Dinitrotoluene		2.0	1.8	ug/L	90	(70-130)		
LCS2	2,6-Dinitrotoluene		2.0	1.89	ug/L	94	(70-130)	20	4.9
MBLK	2,6-Dinitrotoluene			<0.05	ug/L				
MRLHI	2,6-Dinitrotoluene		0.1	0.117	ug/L	117	(50-150)		
MS_201003030276	2,6-Dinitrotoluene	ND	2.0	1.74	ug/L	87	(70-130)		
LCS1	4,4-DDD		2.0	2.07	ug/L	104	(70-130)		
LCS2	4,4-DDD		2.0	2.07	ug/L	103	(70-130)	20	0.0
MBLK	4,4-DDD			<0.05	ug/L				
MRLHI	4,4-DDD		0.1	0.0960	ug/L	96	(50-150)		
MS_201003030276	4,4-DDD	ND	2.0	1.96	ug/L	98	(70-130)		
LCS1	4,4-DDE		2.0	2.00	ug/L	100	(70-130)		
LCS2	4,4-DDE		2.0	1.94	ug/L	97	(70-130)	20	3.0
MBLK	4,4-DDE			<0.05	ug/L				
MRLHI	4,4-DDE		0.1	0.0980	ug/L	98	(50-150)		
MS_201003030276	4,4-DDE	ND	2.0	1.88	ug/L	94	(70-130)		
LCS1	4,4-DDT		2.0	1.97	ug/L	99	(70-130)		
LCS2	4,4-DDT		2.0	1.89	ug/L	94	(70-130)	20	4.2
MBLK	4,4-DDT			<0.05	ug/L				
MRLHI	4,4-DDT		0.1	0.117	ug/L	117	(50-150)		
MS_201003030276	4,4-DDT	ND	2.0	1.93	ug/L	96	(70-130)		
LCS1	Acenaphthene		2.0	1.97	ug/L	98	(70-130)		
LCS2	Acenaphthene		2.0	2.00	ug/L	100	(70-130)	20	1.5
MBLK	Acenaphthene			<0.05	ug/L				
MRLHI	Acenaphthene		0.1	0.102	ug/L	102	(50-150)		
MS_201003030276	Acenaphthene	ND	2.0	1.86	ug/L	93	(70-130)		
LCS1	Acenaphthene-d10 (I)			84.6	%	85	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS2	Acenaphthene-d10 (I)			95.4	%	95	(50-150)		
MBLK	Acenaphthene-d10 (I)			80.9	%	81	(50-150)		
MRLHI	Acenaphthene-d10 (I)			86.4	%	86	(50-150)		
MRLLW	Acenaphthene-d10 (I)			97.2	%	97	(50-150)		
MRLMD	Acenaphthene-d10 (I)			86.6	%	87	(50-150)		
MS_201003030276	Acenaphthene-d10 (I)			105	%	105	(50-150)		
LCS1	Acenaphthylene		2.0	1.94	ug/L	97	(70-130)		
LCS2	Acenaphthylene		2.0	1.94	ug/L	97	(70-130)	20	0.0
MBLK	Acenaphthylene			<0.05	ug/L				
MRLHI	Acenaphthylene		0.1	0.0830	ug/L	83	(50-150)		
MS_201003030276	Acenaphthylene	ND	2.0	1.85	ug/L	92	(70-130)		
LCS1	Acetochlor		2.0	1.94	ug/L	97	(70-130)		
LCS2	Acetochlor		2.0	1.99	ug/L	100	(70-130)	20	2.5
MBLK	Acetochlor			<0.05	ug/L				
MRLHI	Acetochlor		0.1	0.100	ug/L	100	(50-150)		
MS_201003030276	Acetochlor	ND	2.0	1.94	ug/L	97	(70-130)		
LCS1	Alachlor		2.0	1.96	ug/L	98	(70-130)		
LCS2	Alachlor		2.0	2.04	ug/L	102	(70-130)	20	4.0
MBLK	Alachlor			<0.025	ug/L				
MRLHI	Alachlor		0.1	0.102	ug/L	102	(50-150)		
MRLMD	Alachlor		0.05	0.0560	ug/L	112	(50-150)		
MS_201003030276	Alachlor	ND	2.0	1.92	ug/L	96	(70-130)		
LCS1	Aldrin		2.0	1.7	ug/L	85	(70-130)		
LCS2	Aldrin		2.0	1.76	ug/L	88	(70-130)	20	3.5
MBLK	Aldrin			<0.025	ug/L				
MRLHI	Aldrin		0.1	0.0910	ug/L	91	(50-150)		
MRLMD	Aldrin		0.05	0.0490	ug/L	98	(50-150)		
MS_201003030276	Aldrin	ND	2.0	1.66	ug/L	83	(70-130)		
LCS1	Alpha-BHC		2.0	2.11	ug/L	105	(70-130)		
LCS2	Alpha-BHC		2.0	2.08	ug/L	104	(70-130)	20	1.4
MBLK	Alpha-BHC			<0.05	ug/L				
MRLHI	Alpha-BHC		0.1	0.112	ug/L	112	(50-150)		
MS_201003030276	Alpha-BHC	ND	2.0	1.92	ug/L	96	(70-130)		
LCS1	alpha-Chlordane		2.0	1.99	ug/L	99	(70-130)		
LCS2	alpha-Chlordane		2.0	2.00	ug/L	100	(70-130)	20	0.50
MBLK	alpha-Chlordane			<0.025	ug/L				
MRLHI	alpha-Chlordane		0.1	0.111	ug/L	111	(50-150)		
MRLMD	alpha-Chlordane		0.05	0.0500	ug/L	100	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_201003030276	alpha-Chlordane	ND	2.0	1.89	ug/L	94	(70-130)		
LCS1	Anthracene		2.0	1.92	ug/L	96	(70-130)		
LCS2	Anthracene		2.0	1.94	ug/L	97	(70-130)	20	1.0
MBLK	Anthracene			<0.01	ug/L				
MRLHI	Anthracene		0.1	0.0900	ug/L	90	(50-150)		
MRLLW	Anthracene		0.02	0.0170	ug/L	85	(50-150)		
MRLMD	Anthracene		0.05	0.0490	ug/L	98	(50-150)		
MS_201003030276	Anthracene	ND	2.0	1.68	ug/L	84	(70-130)		
LCS1	Atrazine		2.0	2.04	ug/L	102	(70-130)		
LCS2	Atrazine		2.0	2.03	ug/L	102	(70-130)	20	0.49
MBLK	Atrazine			<0.025	ug/L				
MRLHI	Atrazine		0.1	0.0990	ug/L	99	(50-150)		
MRLMD	Atrazine		0.05	0.0460	ug/L	92	(50-150)		
MS_201003030276	Atrazine	ND	2.0	1.93	ug/L	97	(70-130)		
LCS1	Benz(a)Anthracene		2.0	2.07	ug/L	104	(70-130)		
LCS2	Benz(a)Anthracene		2.0	2.02	ug/L	101	(70-130)	20	2.4
MBLK	Benz(a)Anthracene			<0.025	ug/L				
MRLHI	Benz(a)Anthracene		0.1	0.110	ug/L	110	(50-150)		
MRLMD	Benz(a)Anthracene		0.05	0.0520	ug/L	104	(50-150)		
MS_201003030276	Benz(a)Anthracene	ND	2.0	1.89	ug/L	95	(70-130)		
LCS1	Benzo(a)pyrene		2.0	2.21	ug/L	111	(70-130)		
LCS2	Benzo(a)pyrene		2.0	2.2	ug/L	110	(70-130)	20	0.45
MBLK	Benzo(a)pyrene			<0.01	ug/L				
MRLHI	Benzo(a)pyrene		0.1	0.107	ug/L	107	(50-150)		
MRLLW	Benzo(a)pyrene		0.02	0.0230	ug/L	115	(50-150)		
MRLMD	Benzo(a)pyrene		0.05	0.0610	ug/L	122	(50-150)		
MS_201003030276	Benzo(a)pyrene	ND	2.0	3.08	ug/L	**154**	(70-130)		
LCS1	Benzo(b)Fluoranthene		2.0	2.15	ug/L	108	(70-130)		
LCS2	Benzo(b)Fluoranthene		2.0	2.16	ug/L	108	(70-130)	20	0.46
MBLK	Benzo(b)Fluoranthene			<0.01	ug/L				
MRLHI	Benzo(b)Fluoranthene		0.1	0.115	ug/L	115	(50-150)		
MRLLW	Benzo(b)Fluoranthene		0.02	0.0230	ug/L	115	(50-150)		
MRLMD	Benzo(b)Fluoranthene		0.05	0.0640	ug/L	128	(50-150)		
MS_201003030276	Benzo(b)Fluoranthene	ND	2.0	2.98	ug/L	**149**	(70-130)		
LCS1	Benzo(g,h,i)Perylene		2.0	2.34	ug/L	117	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2.0	2.33	ug/L	117	(70-130)	20	0.43
MBLK	Benzo(g,h,i)Perylene			<0.025	ug/L				
MRLHI	Benzo(g,h,i)Perylene		0.1	0.113	ug/L	113	(50-150)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLMD	Benzo(g,h,i)Perylene		0.05	0.0640	ug/L	128	(50-150)		
MS_201003030276	Benzo(g,h,i)Perylene	ND	2.0	3.25	ug/L	**163**	(70-130)		
LCS1	Benzo(k)Fluoranthene		2.0	2.25	ug/L	113	(70-130)		
LCS2	Benzo(k)Fluoranthene		2.0	2.25	ug/L	113	(70-130)	20	0.0
MBLK	Benzo(k)Fluoranthene			<0.01	ug/L				
MRLHI	Benzo(k)Fluoranthene		0.1	0.115	ug/L	115	(50-150)		
MRLLW	Benzo(k)Fluoranthene		0.02	0.0210	ug/L	105	(50-150)		
MRLMD	Benzo(k)Fluoranthene		0.05	0.0600	ug/L	120	(50-150)		
MS_201003030276	Benzo(k)Fluoranthene	ND	2.0	3.16	ug/L	**158**	(70-130)		
LCS1	Beta-BHC		2.0	2.08	ug/L	104	(70-130)		
LCS2	Beta-BHC		2.0	2.04	ug/L	102	(70-130)	20	1.9
MBLK	Beta-BHC			<0.05	ug/L				
MRLHI	Beta-BHC		0.1	0.116	ug/L	116	(50-150)		
MS_201003030276	Beta-BHC	ND	2.0	1.97	ug/L	98	(70-130)		
LCS1	Bromacil		2.0	2.21	ug/L	111	(70-130)		
LCS2	Bromacil		2.0	2.17	ug/L	109	(70-130)	20	1.8
MBLK	Bromacil			<0.05	ug/L				
MRLHI	Bromacil		0.1	0.0980	ug/L	98	(50-150)		
MS_201003030276	Bromacil	ND	2.0	2.05	ug/L	102	(70-130)		
LCS1	Butachlor		2.0	2.07	ug/L	103	(70-130)		
LCS2	Butachlor		2.0	2.12	ug/L	106	(70-130)	20	2.4
MBLK	Butachlor			<0.025	ug/L				
MRLHI	Butachlor		0.1	0.115	ug/L	115	(50-150)		
MRLMD	Butachlor		0.05	0.0500	ug/L	100	(50-150)		
MS_201003030276	Butachlor	ND	2.0	1.95	ug/L	98	(70-130)		
LCS1	Butylbenzylphthalate		2.0	2.13	ug/L	107	(70-130)		
LCS2	Butylbenzylphthalate		2.0	2.15	ug/L	107	(70-130)	20	0.94
MBLK	Butylbenzylphthalate			<0.15	ug/L				
MRLHI	Butylbenzylphthalate		0.3	0.315	ug/L	105	(50-150)		
MS_201003030276	Butylbenzylphthalate	ND	2.0	2.05	ug/L	102	(70-130)		
LCS1	Caffeine by method 525mod		2.0	1.7	ug/L	85	(45-137)		
LCS2	Caffeine by method 525mod		2.0	1.69	ug/L	85	(45-137)	20	0.59
MBLK	Caffeine by method 525mod			<0.01	ug/L				
MRLHI	Caffeine by method 525mod		0.1	0.0830	ug/L	83	(50-150)		
MRLMD	Caffeine by method 525mod		0.05	0.0450	ug/L	90	(50-150)		
MS_201003030276	Caffeine by method 525mod	ND	2.0	1.55	ug/L	78	(46-144)		
LCS1	Chlorobenzilate		2.0	2.04	ug/L	102	(70-130)		
LCS2	Chlorobenzilate		2.0	2.00	ug/L	100	(70-130)	20	2.0

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Chlorobenzilate			<0.05	ug/L				
MRLHI	Chlorobenzilate		0.1	0.0910	ug/L	91	(50-150)		
MS_201003030276	Chlorobenzilate	ND	2.0	1.95	ug/L	97	(70-130)		
LCS1	Chloroneb		2.0	2.00	ug/L	100	(70-130)		
LCS2	Chloroneb		2.0	1.97	ug/L	99	(70-130)	20	1.5
MBLK	Chloroneb			<0.05	ug/L				
MRLHI	Chloroneb		0.1	0.102	ug/L	102	(50-150)		
MS_201003030276	Chloroneb	ND	2.0	1.83	ug/L	92	(70-130)		
LCS1	Chlorothalonil(Draconil,Bravo)		2.0	2.01	ug/L	101	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2.0	2.02	ug/L	101	(70-130)	20	0.50
MBLK	Chlorothalonil(Draconil,Bravo)			<0.05	ug/L				
MRLHI	Chlorothalonil(Draconil,Bravo)		0.1	0.100	ug/L	100	(50-150)		
MS_201003030276	Chlorothalonil(Draconil,Bravo)	ND	2.0	1.92	ug/L	96	(70-130)		
LCS1	Chlorpyrifos (Dursban)		2.0	2.08	ug/L	104	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2.0	2.14	ug/L	107	(70-130)	20	2.8
MBLK	Chlorpyrifos (Dursban)			<0.025	ug/L				
MRLHI	Chlorpyrifos (Dursban)		0.1	0.109	ug/L	109	(50-150)		
MRLMD	Chlorpyrifos (Dursban)		0.05	0.0540	ug/L	108	(50-150)		
MS_201003030276	Chlorpyrifos (Dursban)	ND	2.0	2.01	ug/L	100	(70-130)		
LCS1	Chrysene		2.0	2.03	ug/L	102	(70-130)		
LCS2	Chrysene		2.0	2.08	ug/L	104	(70-130)	20	2.4
MBLK	Chrysene			<0.01	ug/L				
MRLHI	Chrysene		0.1	0.106	ug/L	106	(50-150)		
MRLLW	Chrysene		0.02	0.0190	ug/L	95	(50-150)		
MRLMD	Chrysene		0.05	0.0580	ug/L	116	(50-150)		
MS_201003030276	Chrysene	ND	2.0	2.76	ug/L	**138**	(70-130)		
LCS1	Chrysene-d12 (I)			91.2	%	91	(50-150)		
LCS2	Chrysene-d12 (I)			97.1	%	97	(50-150)		
MBLK	Chrysene-d12 (I)			70.1	%	70	(50-150)		
MRLHI	Chrysene-d12 (I)			79.6	%	80	(50-150)		
MRLLW	Chrysene-d12 (I)			87.2	%	87	(50-150)		
MRLMD	Chrysene-d12 (I)			75.5	%	76	(50-150)		
MS_201003030276	Chrysene-d12 (I)			74.8	%	75	(50-150)		
LCS1	Delta-BHC		2.0	2.01	ug/L	101	(70-130)		
LCS2	Delta-BHC		2.0	1.94	ug/L	97	(70-130)	20	3.5
MBLK	Delta-BHC			<0.05	ug/L				
MRLHI	Delta-BHC		0.1	0.100	ug/L	100	(50-150)		
MS_201003030276	Delta-BHC	ND	2.0	1.84	ug/L	92	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Di(2-Ethylhexyl)phthalate		2.0	2.33	ug/L	116	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2.0	2.41	ug/L	121	(70-130)	20	3.4
MBLK	Di(2-Ethylhexyl)phthalate			<0.15	ug/L				
MRLHI	Di(2-Ethylhexyl)phthalate		0.3	0.506	ug/L	**169**	(50-150)		
MS_201003030276	Di(2-Ethylhexyl)phthalate	ND	2.0	2.91	ug/L	**146**	(70-130)		
LCS1	Di-(2-Ethylhexyl)adipate		2.0	2.06	ug/L	103	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2.0	2.06	ug/L	103	(70-130)	20	0.48
MBLK	Di-(2-Ethylhexyl)adipate			<0.15	ug/L				
MRLHI	Di-(2-Ethylhexyl)adipate		0.3	0.307	ug/L	102	(50-150)		
MS_201003030276	Di-(2-Ethylhexyl)adipate	ND	2.0	2.01	ug/L	101	(70-130)		
LCS1	Di-n-Butylphthalate		4.0	4.04	ug/L	101	(70-130)		
LCS2	Di-n-Butylphthalate		4.0	4.08	ug/L	102	(70-130)	20	0.99
MBLK	Di-n-Butylphthalate			<0.15	ug/L				
MRLHI	Di-n-Butylphthalate		0.4	0.414	ug/L	104	(50-150)		
MS_201003030276	Di-n-Butylphthalate	ND	4.0	3.87	ug/L	97	(70-130)		
LCS1	Di-N-octylphthalate		2.0	1.85	ug/L	92	(70-130)		
LCS2	Di-N-octylphthalate		2.0	1.9	ug/L	95	(70-130)	20	2.7
MBLK	Di-N-octylphthalate			<0.05	ug/L				
MRLHI	Di-N-octylphthalate		0.1	0.122	ug/L	122	(50-150)		
MS_201003030276	Di-N-octylphthalate	ND	2.0	2.75	ug/L	**138**	(70-130)		
LCS1	Diazinon (Qualitative)		2.0	1.85	ug/L	92	(70-130)		
LCS2	Diazinon (Qualitative)		2.0	1.93	ug/L	96	(70-130)	20	4.2
MBLK	Diazinon (Qualitative)			<0.05	ug/L				
MRLHI	Diazinon (Qualitative)		0.1	0.0910	ug/L	91	(50-150)		
MS_201003030276	Diazinon (Qualitative)	ND	2.0	1.79	ug/L	89	(70-130)		
LCS1	Dibenz(a,h)Anthracene		2.0	2.44	ug/L	122	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2.0	2.36	ug/L	118	(70-130)	20	3.3
MBLK	Dibenz(a,h)Anthracene			<0.025	ug/L				
MRLHI	Dibenz(a,h)Anthracene		0.1	0.118	ug/L	118	(50-150)		
MRLMD	Dibenz(a,h)Anthracene		0.05	0.0660	ug/L	132	(50-150)		
MS_201003030276	Dibenz(a,h)Anthracene	ND	2.0	3.44	ug/L	**172**	(70-130)		
LCS1	Dichlorvos (DDVP)		2.0	2.08	ug/L	104	(70-130)		
LCS2	Dichlorvos (DDVP)		2.0	2.06	ug/L	103	(70-130)	20	0.48
MBLK	Dichlorvos (DDVP)			<0.025	ug/L				
MRLHI	Dichlorvos (DDVP)		0.1	0.0960	ug/L	96	(50-150)		
MRLMD	Dichlorvos (DDVP)		0.05	0.0520	ug/L	104	(50-150)		
MS_201003030276	Dichlorvos (DDVP)	ND	2.0	1.88	ug/L	94	(70-130)		

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	Dieldrin		2.0	1.97	ug/L	99	(70-130)		
LCS2	Dieldrin		2.0	2.01	ug/L	100	(70-130)	20	2.0
MBLK	Dieldrin			<0.05	ug/L				
MRLHI	Dieldrin		0.1	0.114	ug/L	114	(50-150)		
MS_201003030276	Dieldrin	ND	2.0	1.88	ug/L	94	(70-130)		
LCS1	Diethylphthalate		2.0	2.09	ug/L	104	(70-130)		
LCS2	Diethylphthalate		2.0	2.08	ug/L	104	(70-130)	20	0.48
MBLK	Diethylphthalate			<0.15	ug/L				
MRLHI	Diethylphthalate		0.3	0.311	ug/L	104	(50-150)		
MS_201003030276	Diethylphthalate	ND	2.0	1.97	ug/L	99	(70-130)		
LCS1	Dimethoate		2.0	1.53	ug/L	77	(35-100)		
LCS2	Dimethoate		2.0	1.54	ug/L	77	(35-100)	20	0.65
MBLK	Dimethoate			<0.05	ug/L				
MRLHI	Dimethoate		0.1	0.0800	ug/L	80	(50-150)		
MS_201003030276	Dimethoate	ND	2.0	1.35	ug/L	68	(34-111)		
LCS1	Dimethylphthalate		2.0	2.07	ug/L	104	(70-130)		
LCS2	Dimethylphthalate		2.0	2.06	ug/L	103	(70-130)	20	0.48
MBLK	Dimethylphthalate			<0.15	ug/L				
MRLHI	Dimethylphthalate		0.3	0.303	ug/L	101	(50-150)		
MS_201003030276	Dimethylphthalate	ND	2.0	1.91	ug/L	96	(70-130)		
LCS1	Endosulfan I (Alpha)		2.0	2.01	ug/L	101	(70-130)		
LCS2	Endosulfan I (Alpha)		2.0	2.09	ug/L	104	(70-130)	20	3.9
MBLK	Endosulfan I (Alpha)			<0.05	ug/L				
MRLHI	Endosulfan I (Alpha)		0.1	0.104	ug/L	104	(50-150)		
MS_201003030276	Endosulfan I (Alpha)	ND	2.0	1.83	ug/L	91	(70-130)		
LCS1	Endosulfan II (Beta)		2.0	2.05	ug/L	103	(70-130)		
LCS2	Endosulfan II (Beta)		2.0	2.11	ug/L	106	(70-130)	20	2.9
MBLK	Endosulfan II (Beta)			<0.05	ug/L				
MRLHI	Endosulfan II (Beta)		0.1	0.0990	ug/L	99	(50-150)		
MS_201003030276	Endosulfan II (Beta)	ND	2.0	1.87	ug/L	93	(70-130)		
LCS1	Endosulfan Sulfate		2.0	2.07	ug/L	104	(70-130)		
LCS2	Endosulfan Sulfate		2.0	2.04	ug/L	102	(70-130)	20	1.5
MBLK	Endosulfan Sulfate			<0.05	ug/L				
MRLHI	Endosulfan Sulfate		0.1	0.107	ug/L	107	(50-150)		
MS_201003030276	Endosulfan Sulfate	ND	2.0	1.97	ug/L	98	(70-130)		
LCS1	Endrin		2.0	2.00	ug/L	100	(70-130)		
LCS2	Endrin		2.0	1.98	ug/L	99	(70-130)	20	1.0
MBLK	Endrin			<0.05	ug/L				

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Endrin		0.1	0.108	ug/L	108	(50-150)		
MS_201003030276	Endrin	ND	2.0	1.88	ug/L	94	(70-130)		
LCS1	Endrin Aldehyde		2.0	1.76	ug/L	88	(70-130)		
LCS2	Endrin Aldehyde		2.0	1.82	ug/L	91	(70-130)	20	3.4
MBLK	Endrin Aldehyde			<0.05	ug/L				
MRLHI	Endrin Aldehyde		0.1	0.110	ug/L	110	(50-150)		
MS_201003030276	Endrin Aldehyde	ND	2.0	1.76	ug/L	88	(70-130)		
LCS1	EPTC		2.0	1.98	ug/L	99	(70-130)		
LCS2	EPTC		2.0	2.02	ug/L	101	(70-130)	20	2.0
MBLK	EPTC			<0.05	ug/L				
MRLHI	EPTC		0.1	0.107	ug/L	107	(50-150)		
MS_201003030276	EPTC	ND	2.0	1.84	ug/L	92	(70-130)		
LCS1	Fluoranthene		2.0	2.03	ug/L	101	(70-130)		
LCS2	Fluoranthene		2.0	2.05	ug/L	103	(70-130)	20	0.98
MBLK	Fluoranthene			<0.05	ug/L				
MRLHI	Fluoranthene		0.1	0.0980	ug/L	98	(50-150)		
MS_201003030276	Fluoranthene	ND	2.0	1.89	ug/L	95	(70-130)		
LCS1	Fluorene		2.0	2.05	ug/L	102	(70-130)		
LCS2	Fluorene		2.0	2.05	ug/L	103	(70-130)	20	0.0
MBLK	Fluorene			<0.05	ug/L				
MRLHI	Fluorene		0.1	0.0990	ug/L	99	(50-150)		
MRLMD	Fluorene		0.05	0.0530	ug/L	106	(50-150)		
MS_201003030276	Fluorene	ND	2.0	1.91	ug/L	96	(70-130)		
LCS1	gamma-Chlordane		2.0	2.00	ug/L	100	(70-130)		
LCS2	gamma-Chlordane		2.0	1.98	ug/L	99	(70-130)	20	1.0
MBLK	gamma-Chlordane			<0.025	ug/L				
MRLHI	gamma-Chlordane		0.1	0.0960	ug/L	96	(50-150)		
MRLMD	gamma-Chlordane		0.05	0.0490	ug/L	98	(50-150)		
MS_201003030276	gamma-Chlordane	ND	2.0	1.86	ug/L	93	(70-130)		
LCS1	Heptachlor		2.0	1.89	ug/L	95	(70-130)		
LCS2	Heptachlor		2.0	1.97	ug/L	99	(70-130)	20	4.2
MBLK	Heptachlor			<0.015	ug/L				
MRLHI	Heptachlor		0.1	0.0910	ug/L	91	(50-150)		
MRLLW	Heptachlor		0.02	0.0150	ug/L	75	(50-150)		
MRLMD	Heptachlor		0.05	0.0550	ug/L	110	(50-150)		
MS_201003030276	Heptachlor	ND	2.0	1.82	ug/L	91	(70-130)		
LCS1	Heptachlor Epoxide (isomer B)		2.0	1.96	ug/L	98	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2.0	1.98	ug/L	99	(70-130)	20	1.0

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Heptachlor Epoxide (isomer B)			<0.025	ug/L				
MRLHI	Heptachlor Epoxide (isomer B)		0.1	0.0900	ug/L	90	(50-150)		
MRLMD	Heptachlor Epoxide (isomer B)		0.05	0.0520	ug/L	104	(50-150)		
MS_201003030276	Heptachlor Epoxide (isomer B)	ND	2.0	1.83	ug/L	92	(70-130)		
LCS1	Hexachlorobenzene		2.0	1.91	ug/L	96	(70-130)		
LCS2	Hexachlorobenzene		2.0	1.94	ug/L	97	(70-130)	20	1.6
MBLK	Hexachlorobenzene			<0.025	ug/L				
MRLHI	Hexachlorobenzene		0.3	0.291	ug/L	97	(50-150)		
MRLLW	Hexachlorobenzene		0.06	0.0520	ug/L	87	(50-150)		
MRLMD	Hexachlorobenzene		0.15	0.143	ug/L	95	(50-150)		
MS_201003030276	Hexachlorobenzene	ND	2.0	1.73	ug/L	86	(70-130)		
LCS1	Hexachlorocyclopentadiene		2.0	1.83	ug/L	91	(70-130)		
LCS2	Hexachlorocyclopentadiene		2.0	1.87	ug/L	94	(70-130)	20	2.2
MBLK	Hexachlorocyclopentadiene			<0.025	ug/L				
MRLHI	Hexachlorocyclopentadiene		0.3	0.260	ug/L	87	(50-150)		
MRLLW	Hexachlorocyclopentadiene		0.06	0.0520	ug/L	87	(50-150)		
MRLMD	Hexachlorocyclopentadiene		0.15	0.137	ug/L	91	(50-150)		
MS_201003030276	Hexachlorocyclopentadiene	ND	2.0	1.67	ug/L	84	(70-130)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2.0	2.37	ug/L	119	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2.0	2.3	ug/L	115	(70-130)	20	3.0
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.025	ug/L				
MRLHI	Indeno(1,2,3,c,d)Pyrene		0.1	0.112	ug/L	112	(50-150)		
MRLMD	Indeno(1,2,3,c,d)Pyrene		0.05	0.0550	ug/L	110	(50-150)		
MS_201003030276	Indeno(1,2,3,c,d)Pyrene	ND	2.0	3.29	ug/L	**165**	(70-130)		
LCS1	Isophorone		2.0	1.95	ug/L	97	(70-130)		
LCS2	Isophorone		2.0	1.91	ug/L	95	(70-130)	20	2.1
MBLK	Isophorone			<0.25	ug/L				
MRLHI	Isophorone		0.1	0.110	ug/L	110	(50-150)		
MS_201003030276	Isophorone	ND	2.0	1.8	ug/L	90	(70-130)		
LCS1	Lindane		2.0	1.98	ug/L	99	(70-130)		
LCS2	Lindane		2.0	2.01	ug/L	100	(70-130)	20	1.5
MBLK	Lindane			<0.02	ug/L				
MRLHI	Lindane		0.1	0.113	ug/L	113	(50-150)		
MRLLW	Lindane		0.02	0.0210	ug/L	105	(50-150)		
MRLMD	Lindane		0.05	0.0460	ug/L	92	(50-150)		
MS_201003030276	Lindane	ND	2.0	1.88	ug/L	94	(70-130)		
LCS1	Malathion		2.0	2.1	ug/L	105	(70-130)		
LCS2	Malathion		2.0	2.1	ug/L	105	(70-130)	20	0.48

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MBLK	Malathion			<0.05	ug/L				
MRLHI	Malathion		0.1	0.0980	ug/L	98	(50-150)		
MS_201003030276	Malathion	ND	2.0	1.99	ug/L	99	(70-130)		
LCS1	Methoxychlor		2.0	2.04	ug/L	102	(70-130)		
LCS2	Methoxychlor		2.0	2.06	ug/L	103	(70-130)	20	0.98
MBLK	Methoxychlor			<0.05	ug/L				
MRLHI	Methoxychlor		0.1	0.110	ug/L	110	(50-150)		
MS_201003030276	Methoxychlor	ND	2.0	2.84	ug/L	**142**	(70-130)		
LCS1	Metolachlor		2.0	2.12	ug/L	106	(70-130)		
LCS2	Metolachlor		2.0	2.14	ug/L	107	(70-130)	20	0.94
MBLK	Metolachlor			<0.025	ug/L				
MRLHI	Metolachlor		0.1	0.108	ug/L	108	(50-150)		
MRLMD	Metolachlor		0.05	0.0500	ug/L	100	(50-150)		
MS_201003030276	Metolachlor	ND	2.0	2.02	ug/L	101	(70-130)		
LCS1	Metribuzin		2.0	1.97	ug/L	98	(70-130)		
LCS2	Metribuzin		2.0	1.96	ug/L	98	(70-130)	20	0.51
MBLK	Metribuzin			<0.05	ug/L				
MRLHI	Metribuzin		0.1	0.105	ug/L	105	(50-150)		
MRLMD	Metribuzin		0.05	0.0600	ug/L	120	(50-150)		
MS_201003030276	Metribuzin	ND	2.0	1.9	ug/L	95	(70-130)		
LCS1	Molinate		2.0	2.01	ug/L	100	(70-130)		
LCS2	Molinate		2.0	2.03	ug/L	101	(70-130)	20	0.99
MBLK	Molinate			<0.05	ug/L				
MRLHI	Molinate		0.1	0.103	ug/L	103	(50-150)		
MS_201003030276	Molinate	ND	2.0	1.87	ug/L	93	(70-130)		
LCS1	Naphthalene		2.0	1.85	ug/L	93	(70-130)		
LCS2	Naphthalene		2.0	1.87	ug/L	94	(70-130)	20	1.1
MBLK	Naphthalene			<0.05	ug/L				
MRLHI	Naphthalene		0.1	0.116	ug/L	116	(50-150)		
MS_201003030276	Naphthalene	ND	2.0	1.73	ug/L	86	(70-130)		
LCS1	Parathion		2.0	2.16	ug/L	108	(70-130)		
LCS2	Parathion		2.0	2.16	ug/L	108	(70-130)	20	0.0
MBLK	Parathion			<0.05	ug/L				
MRLHI	Parathion		0.1	0.110	ug/L	110	(50-150)		
MS_201003030276	Parathion	ND	2.0	2.08	ug/L	104	(70-130)		
LCS1	Pendimethalin		2.0	1.98	ug/L	99	(70-130)		
LCS2	Pendimethalin		2.0	2.01	ug/L	101	(70-130)	20	1.5
MBLK	Pendimethalin			<0.05	ug/L				

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Pendimethalin		0.1	0.0980	ug/L	98	(50-150)		
MS_201003030276	Pendimethalin	ND	2.0	1.91	ug/L	96	(70-130)		
LCS1	Pentachlorophenol		8.0	7.98	ug/L	100	(70-130)		
LCS2	Pentachlorophenol		8.0	7.91	ug/L	99	(70-130)	20	0.88
MBLK	Pentachlorophenol			<0.6	ug/L				
MRLHI	Pentachlorophenol		1.2	1.19	ug/L	99	(50-150)		
MS_201003030276	Pentachlorophenol	ND	8.0	7.4	ug/L	93	(70-130)		
LCS1	Permethrin (mixed isomers)		4.0	3.92	ug/L	98	(70-130)		
LCS2	Permethrin (mixed isomers)		4.0	3.9	ug/L	98	(70-130)	20	0.51
MBLK	Permethrin (mixed isomers)			<0.1	ug/L				
MRLHI	Permethrin (mixed isomers)		0.2	0.266	ug/L	133	(50-150)		
MS_201003030276	Permethrin (mixed isomers)	ND	4.0	5.59	ug/L	**140**	(70-130)		
LCS1	Perylene-d12 (S)			93.8	%	94	(70-130)		
LCS2	Perylene-d12 (S)			94.5	%	95	(70-130)		
MBLK	Perylene-d12 (S)			80.5	%	81	(70-130)		
MRLHI	Perylene-d12 (S)			82.9	%	83	(70-130)		
MRLLW	Perylene-d12 (S)			80.8	%	81	(70-130)		
MRLMD	Perylene-d12 (S)			79.1	%	79	(70-130)		
MS_201003030276	Perylene-d12 (S)			96.2	%	96	(70-130)		
LCS1	Phenanthrene		2.0	1.94	ug/L	97	(70-130)		
LCS2	Phenanthrene		2.0	2.00	ug/L	100	(70-130)	20	3.0
MBLK	Phenanthrene			<0.02	ug/L				
MRLHI	Phenanthrene		0.1	0.104	ug/L	104	(50-150)		
MRLLW	Phenanthrene		0.02	0.0190	ug/L	95	(50-150)		
MRLMD	Phenanthrene		0.05	0.0540	ug/L	108	(50-150)		
MS_201003030276	Phenanthrene	ND	2.0	1.86	ug/L	93	(70-130)		
LCS1	Phenanthrene-d10 (I)			88.6	%	89	(50-150)		
LCS2	Phenanthrene-d10 (I)			97.9	%	98	(50-150)		
MBLK	Phenanthrene-d10 (I)			81.9	%	82	(50-150)		
MRLHI	Phenanthrene-d10 (I)			86.9	%	87	(50-150)		
MRLLW	Phenanthrene-d10 (I)			98.0	%	98	(50-150)		
MRLMD	Phenanthrene-d10 (I)			88.0	%	88	(50-150)		
MS_201003030276	Phenanthrene-d10 (I)			107	%	107	(50-150)		
LCS1	Propachlor		2.0	2.00	ug/L	100	(70-130)		
LCS2	Propachlor		2.0	2.00	ug/L	100	(70-130)	20	0.0
MBLK	Propachlor			<0.025	ug/L				
MRLHI	Propachlor		0.1	0.0960	ug/L	96	(50-150)		
MRLMD	Propachlor		0.05	0.0600	ug/L	120	(50-150)		

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MS_201003030276	Propachlor	ND	2.0	1.8	ug/L	90	(70-130)		
LCS1	Pyrene		2.0	2.04	ug/L	102	(70-130)		
LCS2	Pyrene		2.0	2.08	ug/L	104	(70-130)	20	1.9
MBLK	Pyrene			<0.025	ug/L				
MRLHI	Pyrene		0.1	0.0990	ug/L	99	(50-150)		
MRLMD	Pyrene		0.05	0.0520	ug/L	104	(50-150)		
MS_201003030276	Pyrene	ND	2.0	1.91	ug/L	96	(70-130)		
LCS1	Simazine		2.0	2.12	ug/L	106	(70-130)		
LCS2	Simazine		2.0	2.15	ug/L	108	(70-130)	20	1.4
MBLK	Simazine			<0.025	ug/L				
MRLHI	Simazine		0.1	0.102	ug/L	102	(50-150)		
MRLMD	Simazine		0.05	0.0520	ug/L	104	(50-150)		
MS_201003030276	Simazine	ND	2.0	2.00	ug/L	100	(70-130)		
LCS1	Terbacil		2.0	2.21	ug/L	110	(70-130)		
LCS2	Terbacil		2.0	2.07	ug/L	103	(70-130)	20	6.5
MBLK	Terbacil			<0.05	ug/L				
MRLHI	Terbacil		0.1	0.112	ug/L	112	(50-150)		
MS_201003030276	Terbacil	ND	2.0	2.07	ug/L	103	(70-130)		
LCS1	Terbuthylazine		2.0	2.12	ug/L	106	(70-130)		
LCS2	Terbuthylazine		2.0	2.1	ug/L	105	(70-130)	20	0.95
MBLK	Terbuthylazine			<0.2	ug/L				
MRLHI	Terbuthylazine		0.1	0.103	ug/L	103	(50-150)		
MS_201003030276	Terbuthylazine	ND	2.0	1.96	ug/L	98	(70-130)		
LCS1	Thiobencarb		2.0	2.05	ug/L	103	(70-130)		
LCS2	Thiobencarb		2.0	2.08	ug/L	104	(70-130)	20	1.5
MBLK	Thiobencarb			<0.1	ug/L				
MRLHI	Thiobencarb		0.1	0.103	ug/L	103	(50-150)		
MS_201003030276	Thiobencarb	ND	2.0	1.97	ug/L	99	(70-130)		
LCS1	trans-Nonachlor		2.0	1.99	ug/L	99	(70-130)		
LCS2	trans-Nonachlor		2.0	2.01	ug/L	101	(70-130)	20	1.0
MBLK	trans-Nonachlor			<0.025	ug/L				
MRLHI	trans-Nonachlor		0.1	0.0970	ug/L	97	(50-150)		
MRLMD	trans-Nonachlor		0.05	0.0510	ug/L	102	(50-150)		
MS_201003030276	trans-Nonachlor	ND	2.0	1.9	ug/L	95	(70-130)		
LCS1	Trifluralin		2.0	1.9	ug/L	95	(70-130)		
LCS2	Trifluralin		2.0	1.94	ug/L	97	(70-130)	20	2.1
MBLK	Trifluralin			<0.05	ug/L				

Spike recovery is already corrected for native results.
Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.
Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

Locus Technologies
(continued)

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
MRLHI	Trifluralin		0.1	0.115	ug/L	115	(50-150)		
MS_201003030276	Trifluralin	ND	2.0	1.78	ug/L	89	(70-130)		
LCS1	Triphenylphosphate (S)			105	%	105	(70-130)		
LCS2	Triphenylphosphate (S)			104	%	104	(70-130)		
MBLK	Triphenylphosphate (S)			103	%	103	(70-130)		
MRLHI	Triphenylphosphate (S)			105	%	105	(70-130)		
MRLLW	Triphenylphosphate (S)			102	%	102	(70-130)		
MRLMD	Triphenylphosphate (S)			106	%	106	(70-130)		
MS_201003030276	Triphenylphosphate (S)			108	%	108	(70-130)		

QC Ref# 545641 - NTA and EDTA by Ion Chromatography by MWH_MET **Analysis Date: 03/11/2010**

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield (%)	Limits (%)	RPDLimit (%)	RPD%
LCS1	EDTA		0.5	0.491	mg/L	98	(80-120)		
LCS2	EDTA		0.5	0.489	mg/L	98	(80-120)	20	0.41
MBLK	EDTA			<0.1	mg/L				
MRL_CHK	EDTA		0.1	0.106	mg/L	106	(50-150)		
MS_201003090025	EDTA	ND	0.5	0.500	mg/L	100	(80-120)		
MS_201003090142	EDTA	ND	0.5	0.502	mg/L	100	(80-120)		
MSD_201003090025	EDTA	ND	0.5	0.529	mg/L	106	(80-120)	20	5.9
MSD_201003090142	EDTA	ND	0.5	0.522	mg/L	104	(80-120)	20	3.9
LCS1	NTA		0.2	0.209	mg/L	105	(80-120)		
LCS2	NTA		0.2	0.218	mg/L	109	(80-120)	20	4.2
MBLK	NTA			<0.1	mg/L				
MRL_CHK	NTA		0.1	0.108	mg/L	108	(50-150)		
MS_201003090025	NTA	ND	0.2	0.196	mg/L	98	(80-120)		
MS_201003090142	NTA	ND	0.2	0.199	mg/L	100	(80-120)		
MSD_201003090025	NTA	ND	0.2	0.186	mg/L	93	(80-120)	20	5.0
MSD_201003090142	NTA	ND	0.2	0.178	mg/L	89	(80-120)	20	12

Spike recovery is already corrected for native results.
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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.
(S) Indicates surrogate compound.
(I) Indicates internal standard compound.
RPD not calculated for LCS2 when different a concentration than LCS1 is used
RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level)

LABORATORY SERVICES
1026 Blossom Hill Road
San Jose CA 95123-1103
Santa Clara Valley Water District

Certificate of Analysis

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

03/04/2010

Henry Barrientos
Groundwater Management Unit
Water Supply Management Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Henry Barrientos,

This transmits the analytical results for the Laboratory services that you requested. The data contained herein are supported by the Laboratory Services Unit's Quality Assurance/Quality Control Program.

The analytical results, quality control information, and sample handling observations have been reviewed for both completeness and accuracy, with any exceptions noted.

Laboratory Analyst(s)

James N. Scott
Laboratory Manager

LOCUS TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14618

PROJECT NAME Reclaimed Water

PROJECT NUMBER 27011-07-4200

RECORDER (SIGN)

SAMPLERS Henry Castro Jr (PRINT)

(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
[✓ D] Plastic ~~liter~~ 250 ml
E. Brass Tube
F. Other

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO.

NO.	DATE	TIME	SAMPLE ID	AVERAGE TEMP °C	AVERAGE COND micromhos/cm	AVERAGE pH	Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION Unpreserved	HNO3	HCL	Field Filtered (check)	ANALYSIS REQUESTED Bromide	TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES SCVWD lash	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3-1-10	0915	08502E08D012		Mw-1		D	A	1				X	1		✓		0099		
2		1020	08502E08D011		Mw-2		D	A	1				X			✓		0100		
3		1205	08502E07A014		Mw-3		D	A	1				X			✓		0101		
4		1115	08502E07A015		Mw-4		D	A	1				X			✓		~~0102~~		
5			~~L5 comp~~				D	A	1				X			✓		~~0103~~		
6			~~L10-comp~~				D	A	1				X			✓		~~[illegible]~~		
7		0915	Source				D	A	1				X			✓		0103		
8		—	5042				D	A	1				X			✓		0104		
9		—	6143				D	A	1				X			✓		0105		
10																				
11																				
12																				
13																				
14																				
15																				
16																				

NOTES / MISCELLANEOUS

Field / Container Temp.

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Delivered	Cooler	None		3/2/10	0900		3/2/10	0900

Send Lab Results to (Name): Wes Hawthorne cc Norman Wong (Check Office Below) Verbals Requested: Yes ☐ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

REV. 6/02

Certificate of Analysis - Analytical Report

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

Lab No. 201003020099

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**MW-1**	**Groundwater**	**910410150000**	**03/01/2010**	**9:15**	**Thomas Murphy**

Batch: 60007

Prep Date: Analysis Date: 03/02/2010 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.22	mg/L		

Lab No. 201003020100

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**MW-2**	**Groundwater**	**910410150000**	**03/01/2010**	**10:20**	**Thomas Murphy**

Batch: 60007

Prep Date: Analysis Date: 03/02/2010 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.13	mg/L		

Lab No. 201003020101

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**MW-3**	**Groundwater**	**910410150000**	**03/01/2010**	**12:05**	**Thomas Murphy**

Batch: 60007

Prep Date: Analysis Date: 03/02/2010 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.23	mg/L		

Lab No. 201003020102

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**MW-4**	**Groundwater**	**910410150000**	**03/01/2010**	**11:15**	**Thomas Murphy**

Batch: 60007

Prep Date: Analysis Date: 03/02/2010 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.20	mg/L		

Lab No. 201003020103

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**Source**	**Groundwater**	**910410150000**	**03/01/2010**	**9:15**	**Thomas Murphy**

Batch: 60007

Prep Date: Analysis Date: 03/02/2010 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.28	mg/L		

Lab No. 201003020104

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**5042**	**Groundwater**	**910410150000**	**03/01/2010**	**9:15**	**Thomas Murphy**

Batch: 60007

Prep Date: Analysis Date: 03/02/2010 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	<0.05	mg/L		

Lab No. 201003020105

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**5043**	**Groundwater**	**910410150000**	**03/01/2010**	**9:15**	**Thomas Murphy**

Batch: 60007

Prep Date: Analysis Date: 03/02/2010 Method: EPA 300.0 Section: INORGANIC

Test Name	**Result**	**Units**	**Data Qualifier**	**DLR**
Bromide	0.28	mg/L		

Certificate of Analysis - Analytical Report

Legend:

DLR = Detection Limit For Reporting
ND = Not Detected At Or Above The DLR
NT = Not Tested
NR = Not Reported

ABS = Centimeters $^{-1}$
Cells/ml = Cells Per Milliliter
CFU/100 ml = Colony Forming Units Per 100 Milliliters
CFU/ml = Colony Forming Units Per Milliliter
cysts/L = Cysts Per Liter
Deg. C = Degrees Centigrade
mg/L = Milligrams Per Liter
MPN/100ml = Most Probable Number Per 100 Milliliters
ng/L = Nanograms Per Liter

NTU = Nephelometric Turbidity Units
oocysts/L = Oocysts Per Liter
P/A 100ml = Presence/Absence Per 100 Milliliters
pCi/L = Picocuries Per Liter
Rhod-Eqiv = Rhodamine Equivalents
T.O.N. = Threshold Odor Number
ug C/L = Micrograms Carbon Per Liter
ug/L = Micrograms Per Liter
umhos= Microhms

Data Qualifier Definitions:

Certificate of Analysis - QC Report

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

Batch: 60007

QC Code	Test Name		Reported Value	Units	Flag		Acceptance Range	RPD	Flag	RPD Limit
LFB	Bromide	Spike Amount: 1	0.99	mg/L		%Rec: 99	90 - 110			
LFM	Bromide	Spike Amount: 1	1.25	mg/L		%Rec: 96.9	90 - 110			
LFM D	Bromide	Spike Amount: 1	1.25	mg/L		%Rec: 97	90 - 110	0.1		15
QCS R	Bromide	1	0.99	mg/L		%Rec: 99.1	90 - 110			

Report Notes:

QCS, spike recovery, and RPD values that are outside of established limits are underlined.

If an LFM recovery exceeds the established limits for any analyte, and the laboratory performance for other QC parameters is shown to be in control for that analyte, then failure is not system related but due to matrix interferences and is labeled as suspect.

Reported values that are flagged "H" are above the established acceptance range; reported values that are flagged "L" are below the acceptance range. RPD results flagged "H" are above the established RPD limit.-

Quality control sample (LFB, LFM, LFM D, QCS, QCS R, and Surrogate) reporting frequency is based on the method requirement (e.g., a QCS may not be run with every batch).

Legend:

LFB = Laboratory Fortified Blank: An aliquot of a Laboratroty Reagent Blank (LRB) to which known quantities of the method analytes are added in the laboratory. The LFB is analyzed exactly like a sample.

LFB D = Laboratory Fortified Blank Duplicate: A duplicate aliquot of an LRB to which known quantities of the method analytes are added in the laboratory. The LFB D is analyzed exactly like a sample.

LFM = Laboratory Fortified Matrix: An aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM is analyzed exactly like a sample.

LFM D = Laboratory Fortified Matrix Duplicate: A duplicate aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM D is analyzed exactly like a sample.

QCS = Quality Control Sample: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified concentration range.

QCS R = Quality Control Sample Recovery: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS F is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified recovery range.

RPD = Relative Percent Difference

SUR = Surrogate. An organic compound that is similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis.

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2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

Laboratory Job Number 218830
ANALYTICAL REPORT

Locus Technologies
299 Fairchild Dr.
Mountain View, CA 94043

Project : 27011-07-4200
Location : Recycled Water Study
Level : II

Sample ID	Lab ID
L5 COMP	218830-001

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: ______________________
Project Manager

Date: 03/22/2010

NELAP # 01107CA

CASE NARRATIVE

Laboratory number:	**218830**
Client:	**Locus Technologies**
Project:	**27011-07-4200**
Location:	**Recycled Water Study**
Request Date:	**03/15/10**
Samples Received:	**03/15/10**

This data package contains sample and QC results for one water sample, requested for the above referenced project on 03/15/10. The sample was received cold and intact.

Total Phosphorous (SM4500P-E):
No analytical problems were encountered.

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14627

PROJECT NAME SCVWD Recycled Water
PROJECT NUMBER 22011-07-4200
RECORDER (SIGN)
SAMPLERS T. MURPHY (PRINT)
(SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F.] Other Poly 250

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other

ANALYTICAL LAB Curtis & Tompkins

LABORATORY USE ONLY
LAB PROJECT NO. 218830

				AVERAGE					NUMBER OF CONTAINERS AND PRESERVATION					ANALYSIS REQUESTED													LABORATORY USE ONLY		
NO.	DATE	TIME	SAMPLE ID	TEMP °C	COND micromhos/cm	pH	Sample container (enter code)	Sample Description (enter code)	Unpreserved	HNO_3	HCL	H_2SO_4	Field Filtered (check)	Total Phosphate									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
1	3/15/10	COMP	L5 COMP	–	–	–	F	A				1		X									1						
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☑ No ☐

Relinquished By: (Signature)	Received By: (Signature)	Date	Time

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Courier	Cooler	NO		3/15/10	1400		3/15/10	1400

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☑ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ________ TEL ________ FAX ________

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3 of 6

COOLER RECEIPT CHECKLIST

Curtis & Tompkins, Ltd.

Login # 218830 Date Received 3-15-10 Number of coolers 1
Client LVCWS Project SCVWD RECYCLED WATER

Date Opened 3-15-10 By (print) S. EVANS (sign)
Date Logged in 3-16-10 By (print) (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES [✓ NO]
Shipping info

2A. Were custody seals present? ... ☑ YES (circle) [✓ on cooler] on samples ☐ NO
How many 1 Name TOM. MURPHY Date 3-15-10
2B. Were custody seals intact upon arrival? [✓ YES] NO N/A
3. Were custody papers dry and intact when received? [✓ YES] NO
4. Were custody papers filled out properly (ink, signed, etc)? [✓ YES] NO
5. Is the project identifiable from custody papers? (If so fill out top of form) [✓ YES] NO
6. Indicate the packing in cooler: (if other, describe)

☐ Bubble Wrap
☐ Cloth material
☐ Foam blocks
☐ Cardboard
☐ Bags
☐ Styrofoam
☒ None
☐ Paper towels

7. Temperature documentation:

Type of ice used: ☑ Wet ☐ Blue/Gel ☐ None Temp(°C)

☑ Samples Received on ice & cold without a temperature blank

☐ Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES [✓ NO]
If YES, what time were they transferred to freezer?
9. Did all bottles arrive unbroken/unopened? [✓ YES] NO
10. Are samples in the appropriate containers for indicated tests? [✓ YES] NO
11. Are sample labels present, in good condition and complete? [✓ YES] NO
12. Do the sample labels agree with custody papers? [✓ YES] NO
13. Was sufficient amount of sample sent for tests requested? [✓ YES] NO
14. Are the samples appropriately preserved? [✓ YES] NO N/A
15. Are bubbles > 6mm absent in VOA samples? YES NO [✓ N/A]
16. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS
NO TEMP BLANK REC'D. SAMPLE REC'D VERY COLD.

SOP Volume: Client Services
Section: 1.1.2
Page: 1 of 1

Rev. 6 Number 1 of 3
Effective: 23 July 2008
Z:\qc\forms\checklists\Cooler Receipt Checklist_rv6.doc

Total Phosphorous

Lab #:	218830	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Batch#:	161070
Field ID:	L5 COMP	Sampled:	03/15/10
Matrix:	Water	Received:	03/15/10
Units:	mg/L	Analyzed:	03/19/10
Diln Fac:	1.000		

Type	Lab ID	Result	RL
SAMPLE	218830-001	ND	0.030
BLANK	QC536646	ND	0.030

ND= Not Detected
RL= Reporting Limit

Batch QC Report

Total Phosphorous

Lab #:	218830	Location:	Recycled Water Study
Client:	Locus Technologies	Prep:	SMWW18:4500P-B
Project#:	27011-07-4200	Analysis:	SM4500P-E
Analyte:	Phosphorous	Diln Fac:	1.000
Field ID:	ZZZZZZZZZZ	Batch#:	161070
MSS Lab ID:	218891-012	Sampled:	03/17/10
Matrix:	Water	Received:	03/18/10
Units:	mg/L	Analyzed:	03/19/10

Type	Lab ID	MSS Result	Spiked	Result	%REC	Limits	RPD	Lim
MS	QC536647	0.08582	0.1980	0.2422	79	41-144		
MSD	QC536648		0.1980	0.2414	79	41-144	0	24
LCS	QC536649		0.1980	0.2167	109	92-113		

RPD= Relative Percent Difference

LABORATORY SERVICES
Santa Clara Valley Water District

Certificate of Analysis

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

03/16/2010

Henry Barrientos
Groundwater Management Unit
Water Supply Management Division
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118

Dear Henry Barrientos,

This transmits the analytical results for the Laboratory services that you requested. The data contained herein are supported by the Laboratory Services Unit's Quality Assurance/Quality Control Program.

The analytical results, quality control information, and sample handling observations have been reviewed for both completeness and accuracy, with any exceptions noted.

Laboratory Analyst(s)

James N. Scott
Laboratory Manager

Locus TECHNOLOGIES

CHAIN-OF-CUSTODY RECORD (See Reverse for Instructions)

SERIAL NO. 14626

PROJECT NAME SCVWD Recycled Water

PROJECT NUMBER 27011-07-4200

RECORDER T. Murphy (SIGN)

SAMPLERS T. MURPHY (PRINT)

T. Murphy (SIGN)

SAMPLE CONTAINER DESCRIPTION CODES
A. 40-ml VOA Vial
B. Glass Liter
C. Plastic 500-ml
D. Plastic Liter
E. Brass Tube
[✓ F.] Other plastic 250

SAMPLE DESCRIPTION CODES
[✓ A.] Ground Water
B. Surface Water
C. Leachate
D. Rinseate
E. Soil/Sediment
F. Oil
G. Waste
H. Blank/Spike
I. Other ______

TAT CODES
[✓ 1.] Standard
2. 48 Hour
3. 24 Hour
4. Other ______

ANALYTICAL LAB SCVWD

LABORATORY USE ONLY

LAB PROJECT NO. ______

NO.	DATE	TIME	SAMPLE ID	AVERAGE			Sample container (enter code)	Sample Description (enter code)	NUMBER OF CONTAINERS AND PRESERVATION				Field Filtered (check)	ANALYSIS REQUESTED									TAT Requested (enter code)	Maximum Holding Time for Method Requested	Sample Store at 4°C (Check)	No VOA Headspace (Check)	NOTES	ASSIGNED BOTTLE NUMBERS	SAMPLE CONDITION UPON RECEIPT
				TEMP °C	COND micromhos/cm	pH			Unpreserved	HNO_3	HCL			BROMIDE															
1	3/15/10	COMP	L5 COMP	—	—	—	F	A	1					X				0331					1						
2		COMP	L10 COMP	—	—	—	F	A	1					X				0332											
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													
15																													
16																													

NOTES / MISCELLANEOUS

Field / Container Temp. 4°C

Container Sealed with Custody Seal: Yes ☐ No ☑

Relinquished By: (Signature)	Received By: (Signature)	Date	Time
T. Murphy			

Method of Shipment	Description of Transport Container	Other Chains-of-Custody Transported with this Chain (by Serial No.)	Dispatched By: (Signature)	Date	Time	Received for lab By: (Signature)	Date	Time
Drop off	Cooler	NO	Thomas Murphy	3/15/10	1100		3/15/10	1100

Send Lab Results to (Name): Norman Wong (Check Office Below) Verbals Requested: Yes ☑ No ☐

☒ MOUNTAIN VIEW • 299 FAIRCHILD DRIVE • MTN VIEW, CA 94043 • TEL (650) 960-1640 • FAX (650) 960-0739
☐ WALNUT CREEK • 1701 N. CALIFORNIA BLVD • WALNUT CREEK, CA 94596 • TEL (925) 906-8100 • FAX (925) 906-8101
☐ SACRAMENTO • 1100 MELODY LANE • ROSEVILLE, CA 95678 • TEL (916) 677-1751 • FAX (916) 677-1760
☐ OTHER ______ TEL ______ FAX ______

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WHITE: Laboratory Copy YELLOW: Project Copy PINK: Database Copy

Certificate of Analysis - Analytical Report

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

Lab No. 201003150551

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**L5 COMP**	**Groundwater**	**910410150000**	**03/15/2010**	**0:00**	**Thomas M.**

Batch: 60165

Prep Date:	Analysis Date: 03/15/2010	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.27	mg/L		

Lab No. 201003150552

Client ID	Sample Location	Sample Source	Project No.	Collect Date	Collect Time	Collected By
GMU	**L10 COMP**	**Groundwater**	**910410150000**	**03/15/2010**	**0:00**	**Thomas M.**

Batch: 60165

Prep Date:	Analysis Date: 03/15/2010	Method: EPA 300.0	Section: INORGANIC	**Test Name**	**Result**	**Units**	**Data Qualifier**	**DLR**
				Bromide	0.26	mg/L		

Legend:

DLR = Detection Limit For Reporting
ND = Not Detected At Or Above The DLR
NT = Not Tested
NR = Not Reported

ABS = Centimeters $^{-1}$
Cells/ml = Cells Per Milliliter
CFU/100 ml = Colony Forming Units Per 100 Milliliters
CFU/ml = Colony Forming Units Per Milliliter
cysts/L = Cysts Per Liter
Deg. C = Degrees Centigrade
mg/L = Milligrams Per Liter
MPN/100ml = Most Probable Number Per 100 Milliliters
ng/L = Nanograms Per Liter

NTU = Nephelometric Turbidity Units
oocysts/L = Oocysts Per Liter
P/A 100ml = Presence/Absence Per 100 Milliliters
pCi/L = Picocuries Per Liter
Rhod-Eqiv = Rhodamine Equivalents
T.O.N. = Threshold Odor Number
ug C/L = Micrograms Carbon Per Liter
ug/L = Micrograms Per Liter
umhos= Microhms

Data Qualifier Definitions:

Certificate of Analysis - QC Report

Santa Clara Valley Water District Laboratory
1026 Blossom Hill Road - San Jose, CA 95123
Phone: (408) 265-2607 ext. 3228 - Fax: (408) 979-5680

Batch: 60165

QC Code	Test Name		Reported Value	Units	Flag		Acceptance Range	RPD	Flag	RPD Limit
LFB	Bromide	Spike Amount: 1	0.99	mg/L		%Rec: 98.8	90 - 110			
LFM	Bromide	Spike Amount: 1	1.23	mg/L		%Rec: 96.5	90 - 110			
LFM D	Bromide	Spike Amount: 1	1.23	mg/L		%Rec: 96.5	90 - 110	0		15
QCS R	Bromide	1	0.99	mg/L		%Rec: 99.3	90 - 110			

Report Notes:

QCS, spike recovery, and RPD values that are outside of established limits are underlined.

If an LFM recovery exceeds the established limits for any analyte, and the laboratory performance for other QC parameters is shown to be in control for that analyte, then failure is not system related but due to matrix interferences and is labeled as suspect.

Reported values that are flagged "H" are above the established acceptance range; reported values that are flagged "L" are below the acceptance range. RPD results flagged "H" are above the established RPD limit.-

Quality control sample (LFB, LFM, LFM D, QCS, QCS R, and Surrogate) reporting frequency is based on the method requirement (e.g., a QCS may not be run with every batch).

Legend:

LFB = Laboratory Fortified Blank: An aliquot of a Laboratroty Reagent Blank (LRB) to which known quantities of the method analytes are added in the laboratory. The LFB is analyzed exactly like a sample.

LFB D = Laboratory Fortified Blank Duplicate: A duplicate aliquot of an LRB to which known quantities of the method analytes are added in the laboratory. The LFB D is analyzed exactly like a sample.

LFM = Laboratory Fortified Matrix: An aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM is analyzed exactly like a sample.

LFM D = Laboratory Fortified Matrix Duplicate: A duplicate aliquot of an environmental sample to which known quantities of the method analytes are added in the laboratory. The LFM D is analyzed exactly like a sample.

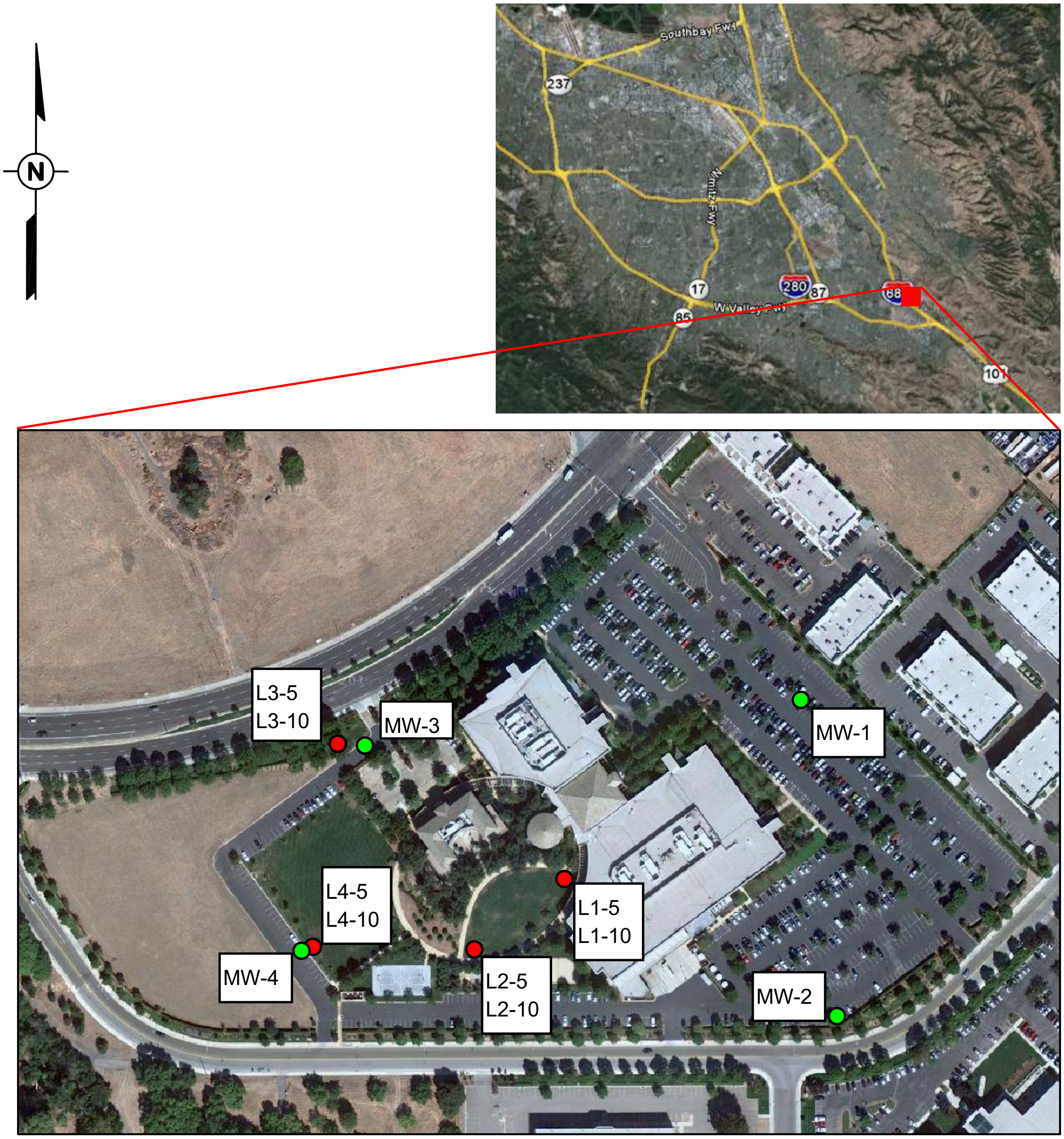
QCS = Quality Control Sample: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified concentration range.

QCS R = Quality Control Sample Recovery: A solution of method analytes of known concentrations which is used to fortify an aliquot of LRB or sample matrix. The QCS R is obtained from a source external to the laboratory and different from the source of calibration standards. Result is weighed against a specified recovery range.

RPD = Relative Percent Difference

SUR = Surrogate. An organic compound that is similar in chemical composition to the analytes of interest and spiked into environmental and batch QC samples prior to sample preparation and analysis.

FIGURES



🟢 Groundwater Monitoring Well
🔴 Lysimeter

SAMPLE LOCATIONS MAP
INTEGRATED DEVICE TECHNOLOGY
6024 SILVER CREEK VALLEY ROAD
SAN JOSE, CA 95138

PREPARED FOR

SANTA CLARA VALLEY WATER DISTRICT

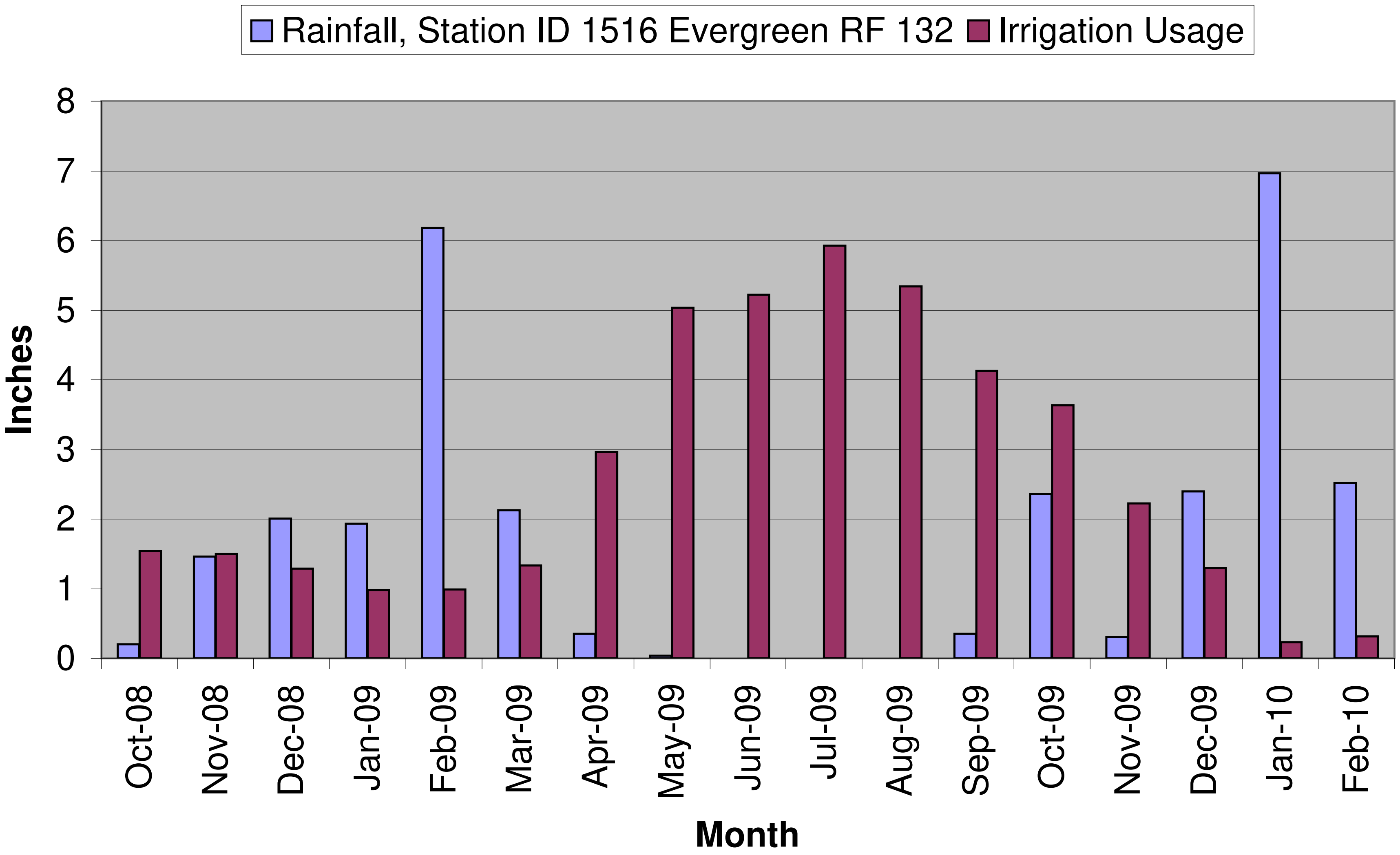
△	04OCT10	ISSUED FOR REPORT	NDW	JWH	JWH
No.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

Locus
TECHNOLOGIES

DRAWING NO.

FIGURE III-2-1

Figure III-2-2 IDT Irrigation



Note: Irrigation usage is based on the monthly volumetric irrigation water usage divided by the total area of irrigated areas on the property.

Figure III-4-1A pH

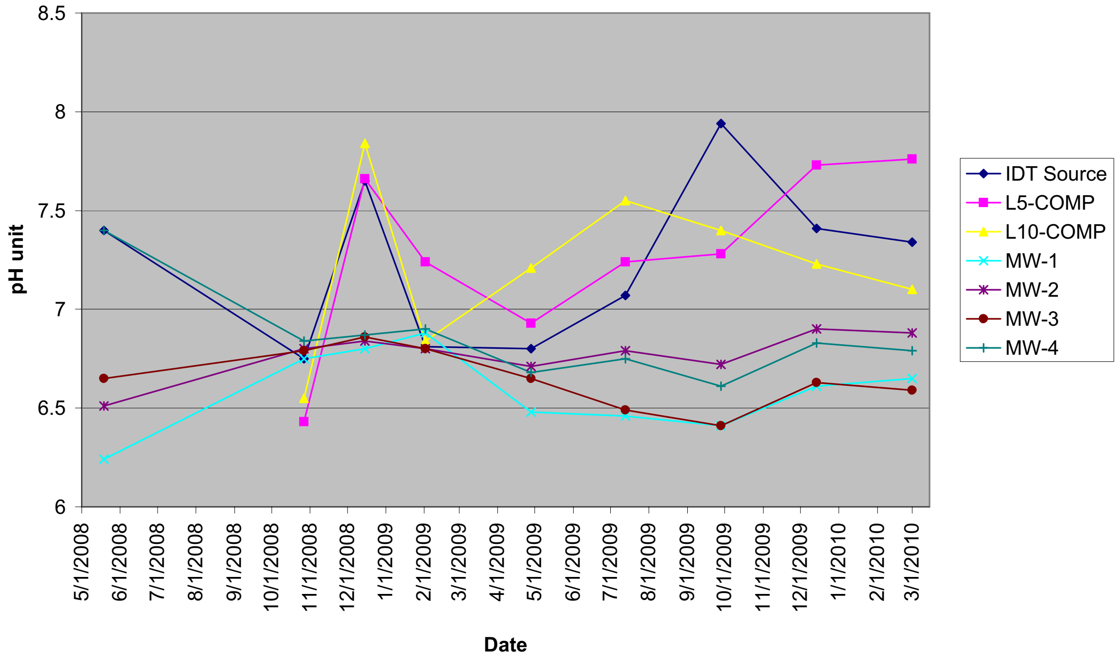


Figure III-4-1B pH

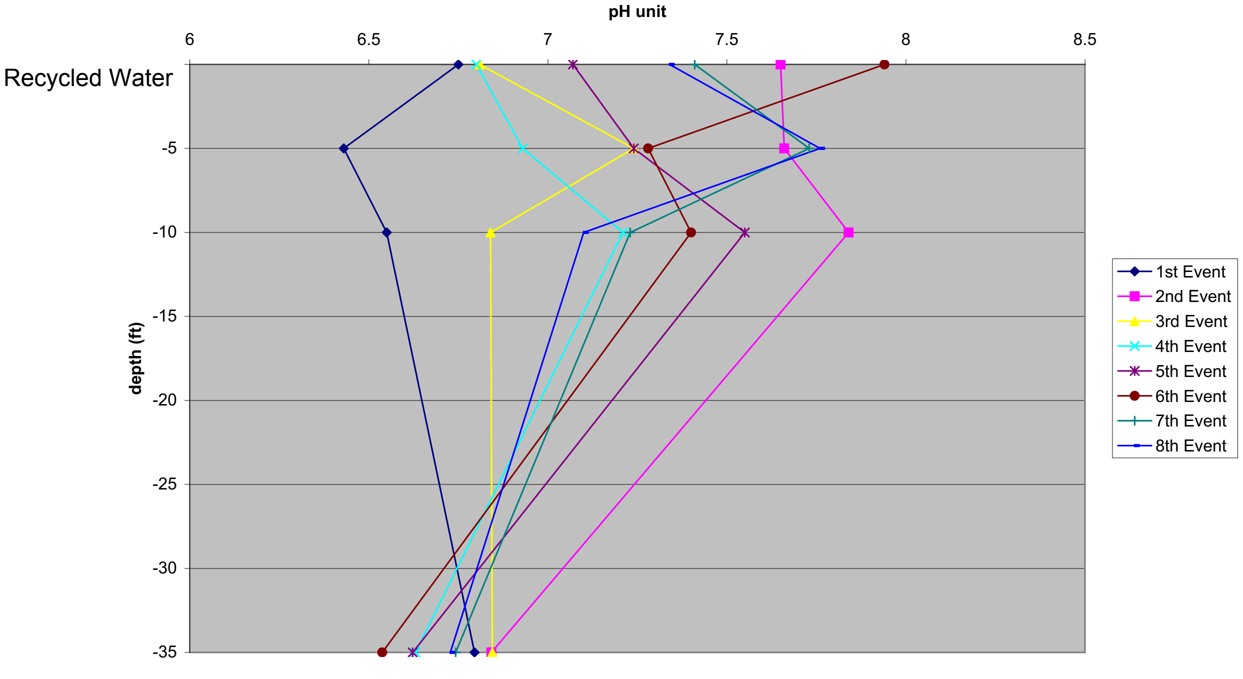


Figure III-4-2A Alkalinity, Total (as CaCO3)

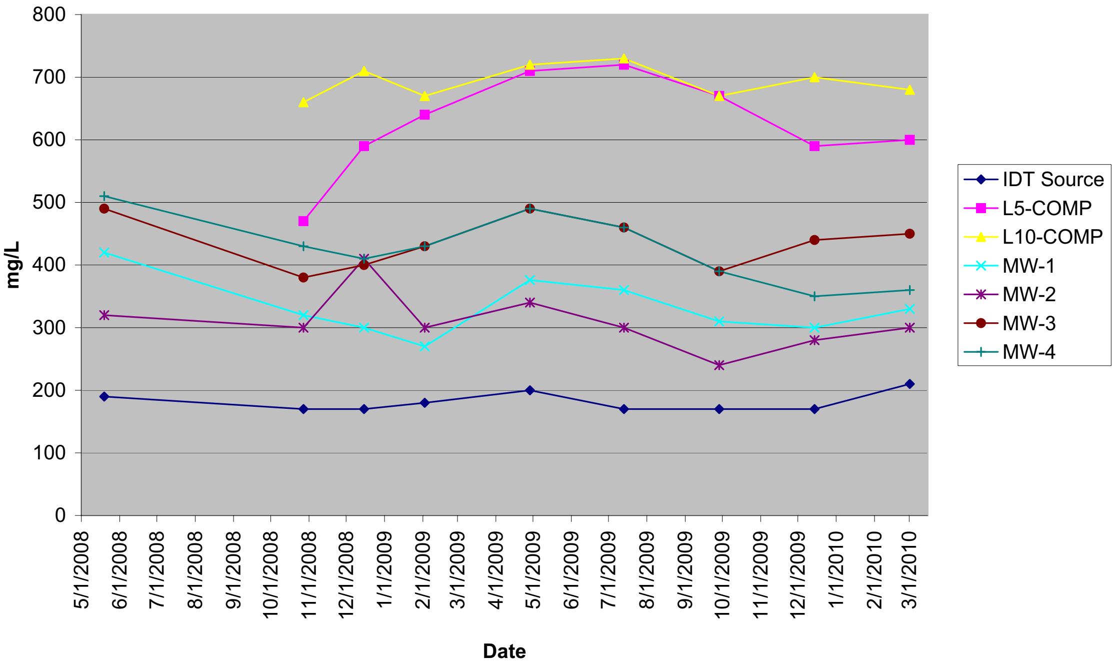


Figure III-4-2B Alkalinity, Total (as CaCO3)

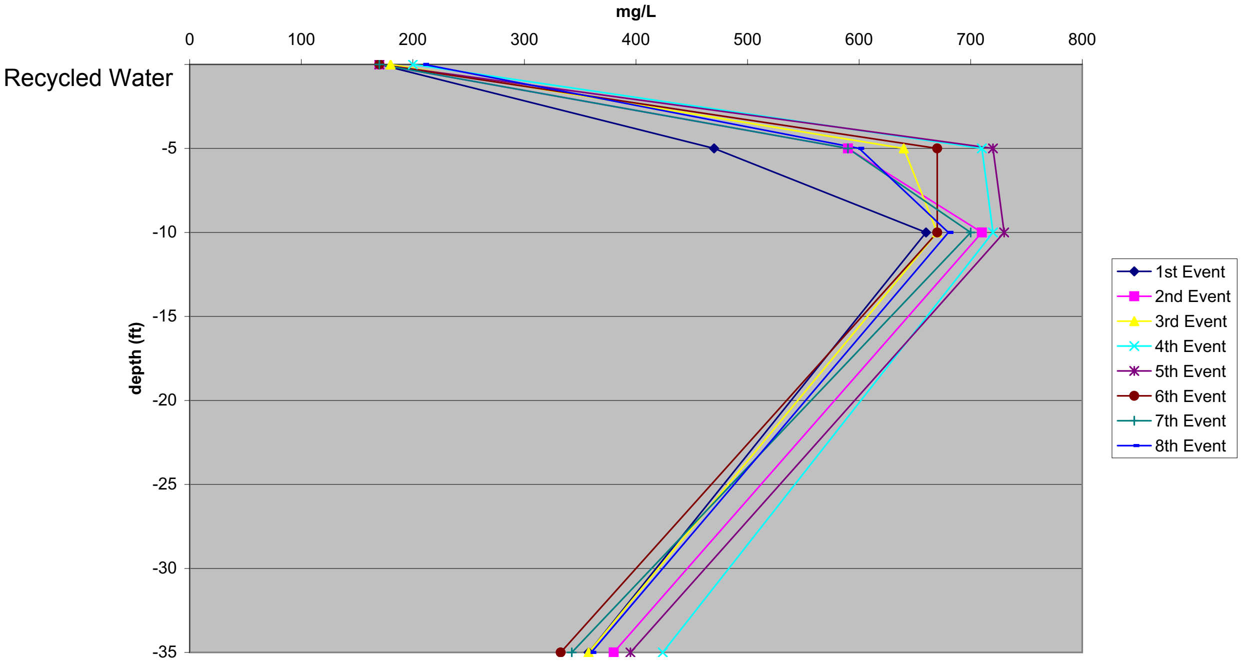


Figure III-4-3A Bicarbonate Alkalinity (as CaCO3)

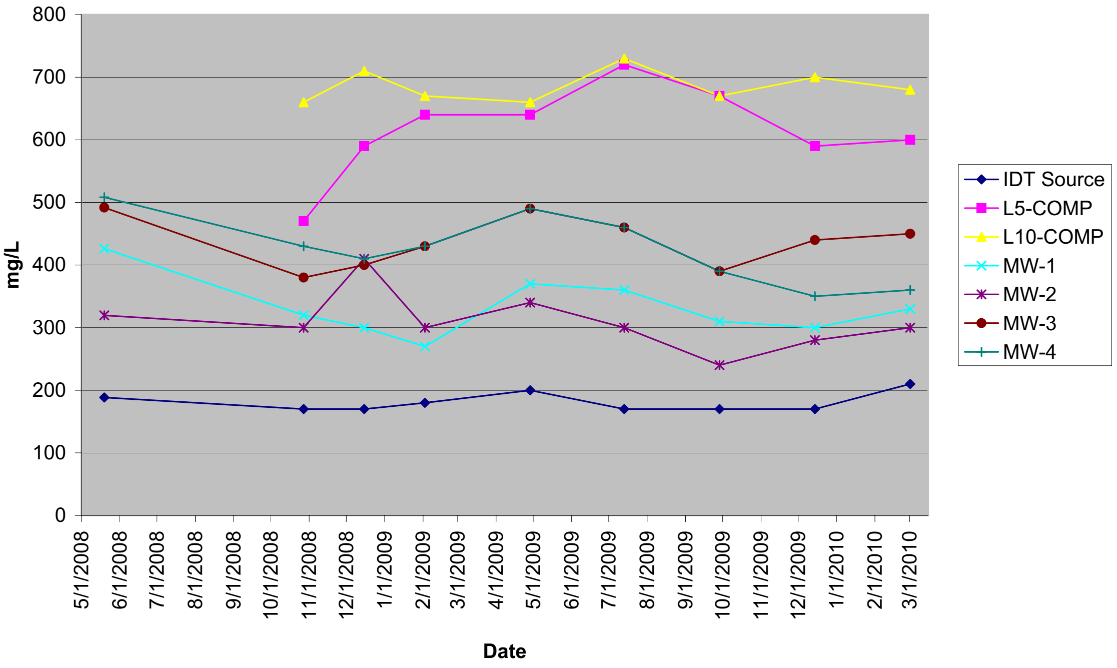


Figure III-4-3B Bicarbonate Alkalinity (as CaCO3)

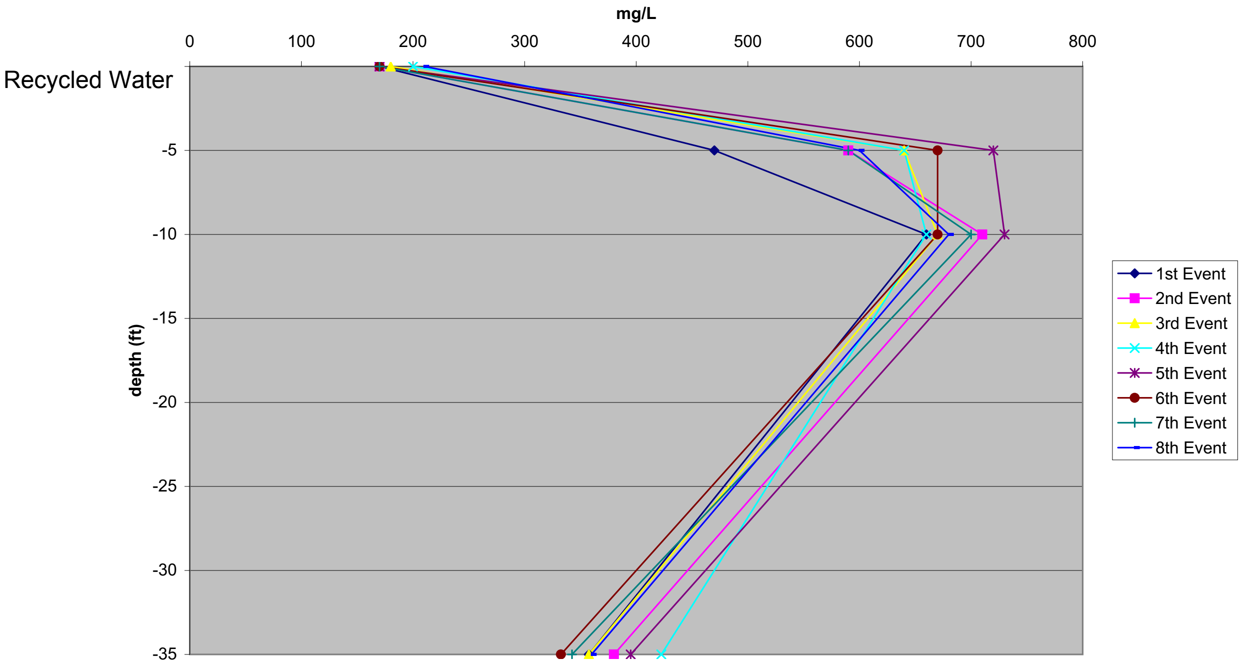


Figure III-4-4A Total Filterable Residue at 180C (TDS)

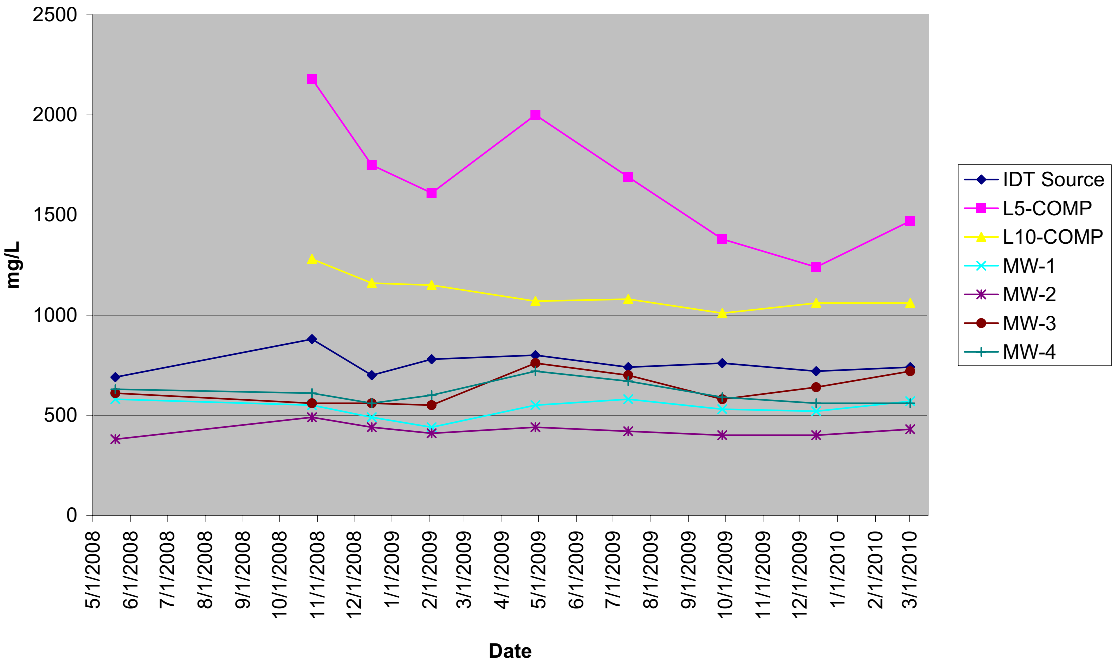


Figure III-4-4B Total Filterable Residue at 180C (TDS)

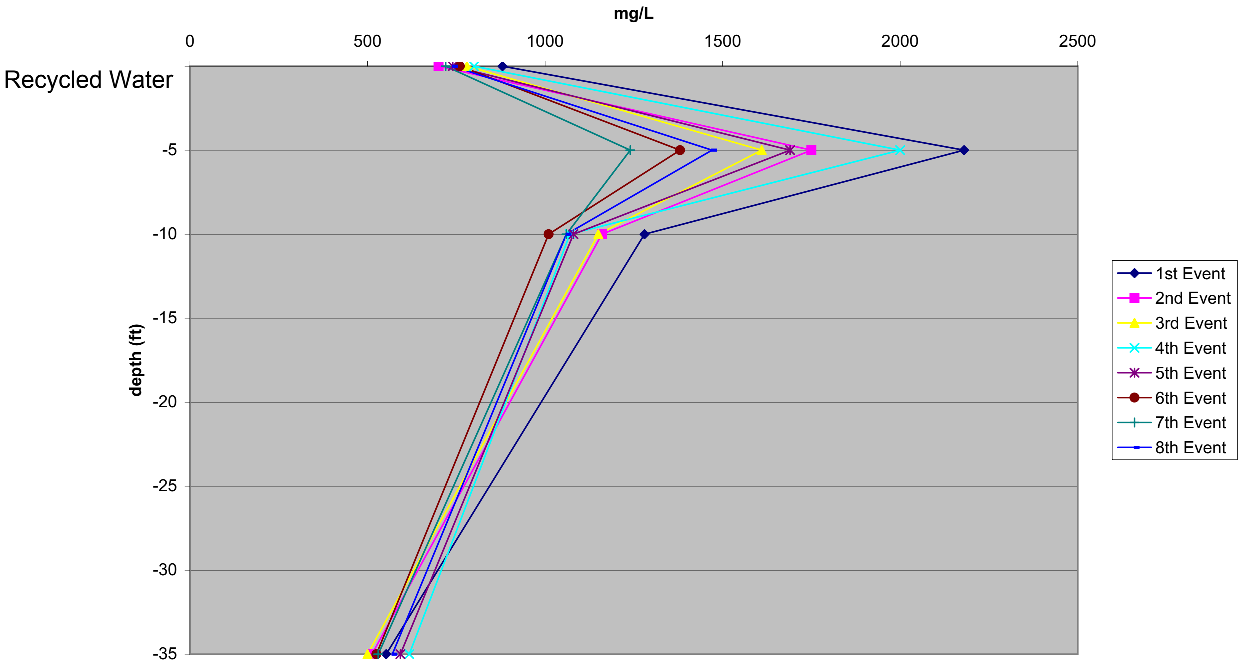
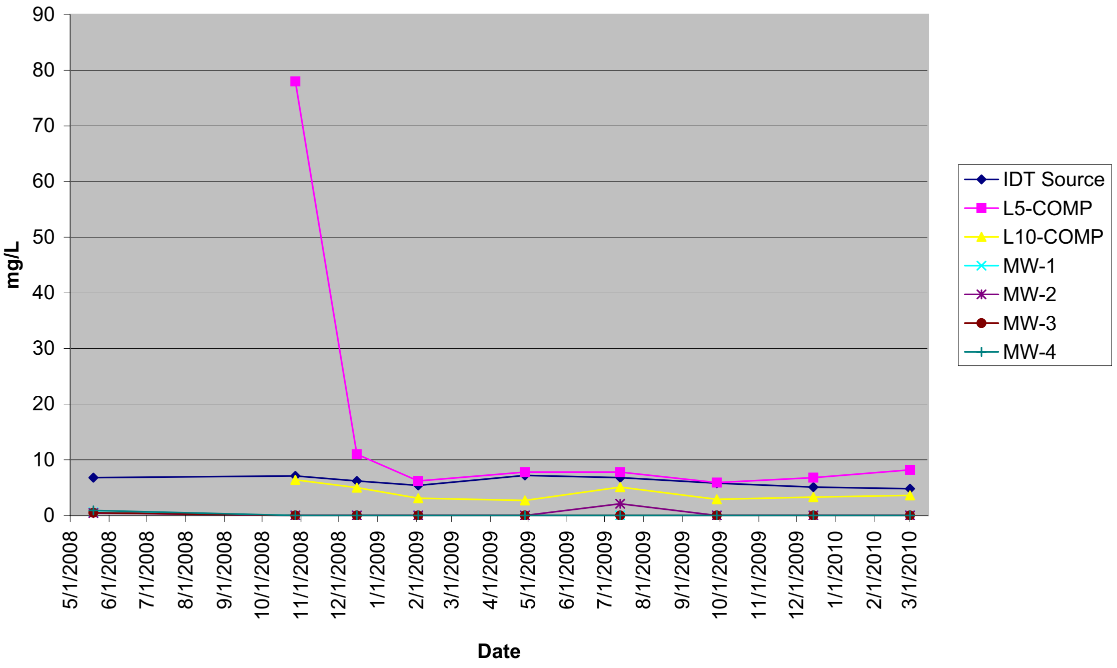
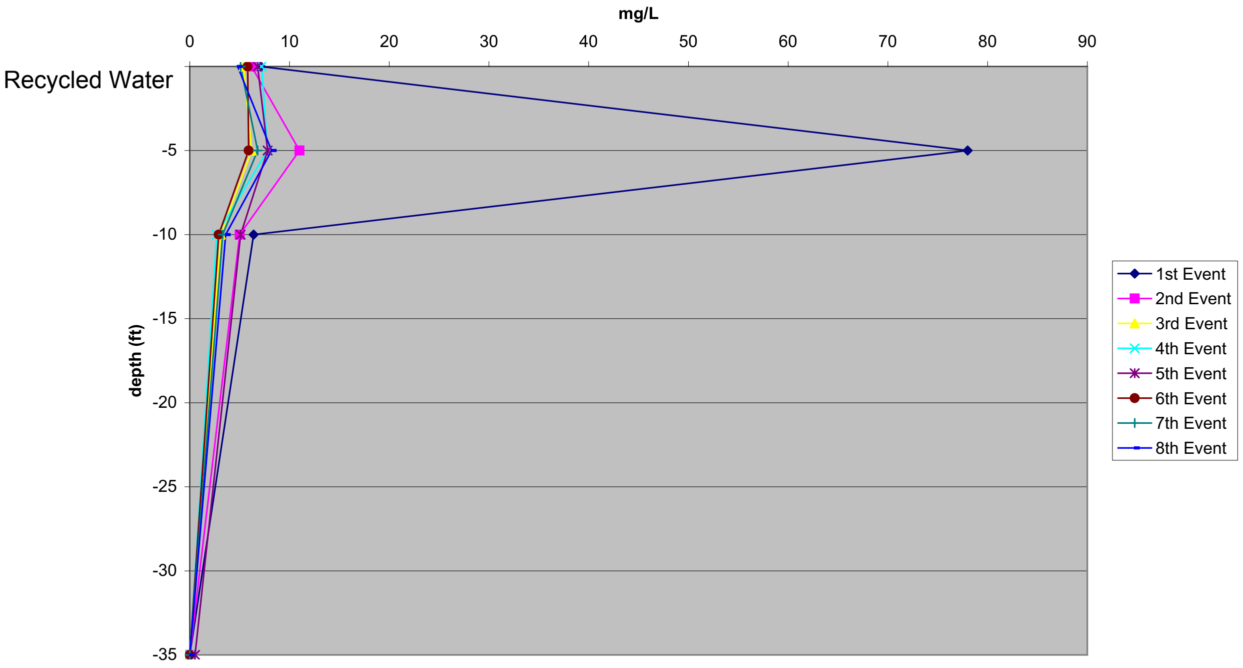


Figure III-4-5A Dissolved Organic Carbon



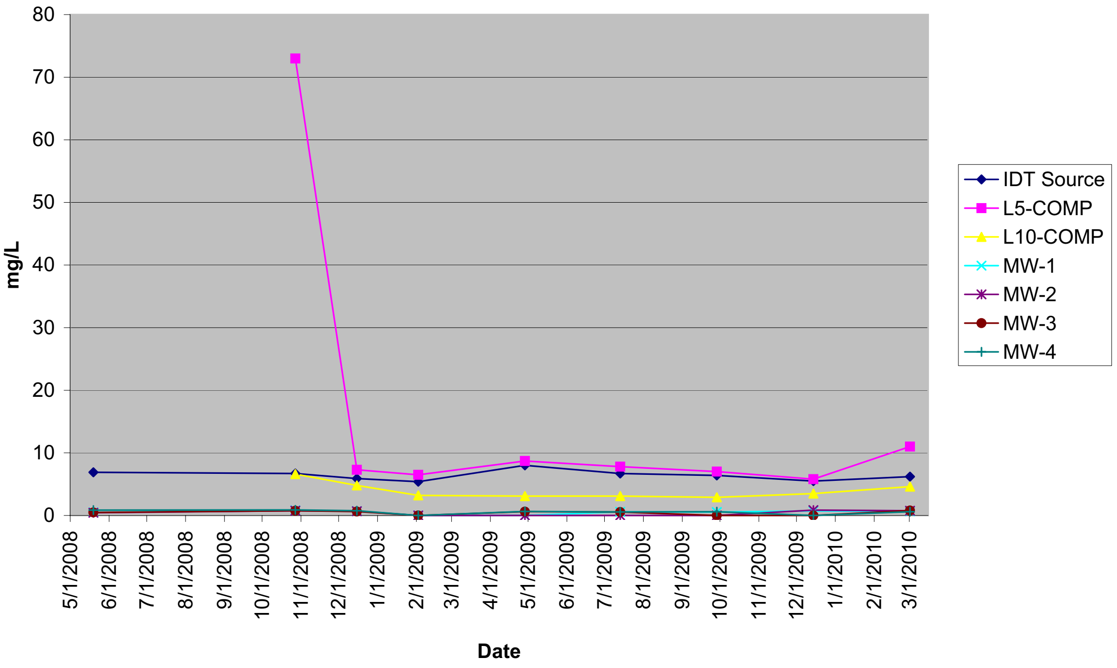
Note: non-detects are treated in the figure as zero.

Figure III-4-5B Dissolved Organic Carbon



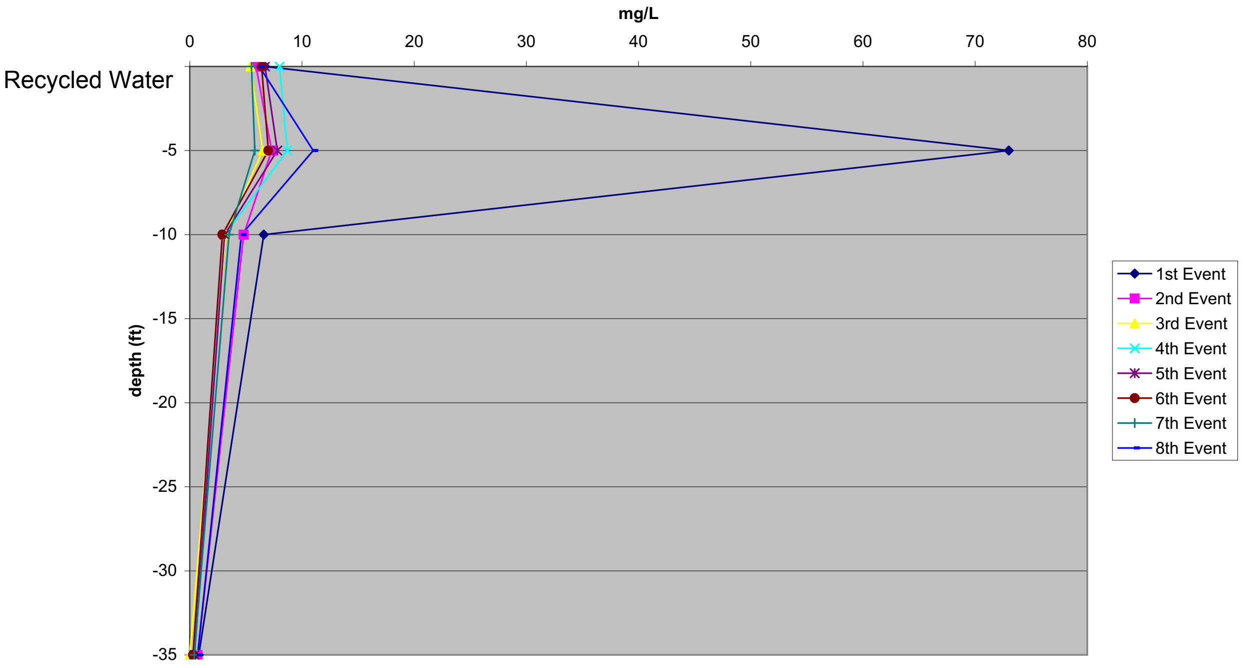
Note: non-detects are treated in the figure as zero.

Figure III-4-6A Total Organic Carbon (TOC)



Note: non-detects are treated in the figure as zero.

Figure III-4-6B Total Organic Carbon (TOC)



Note: non-detects are treated in the figure as zero.

Figure III-4-7A ORP

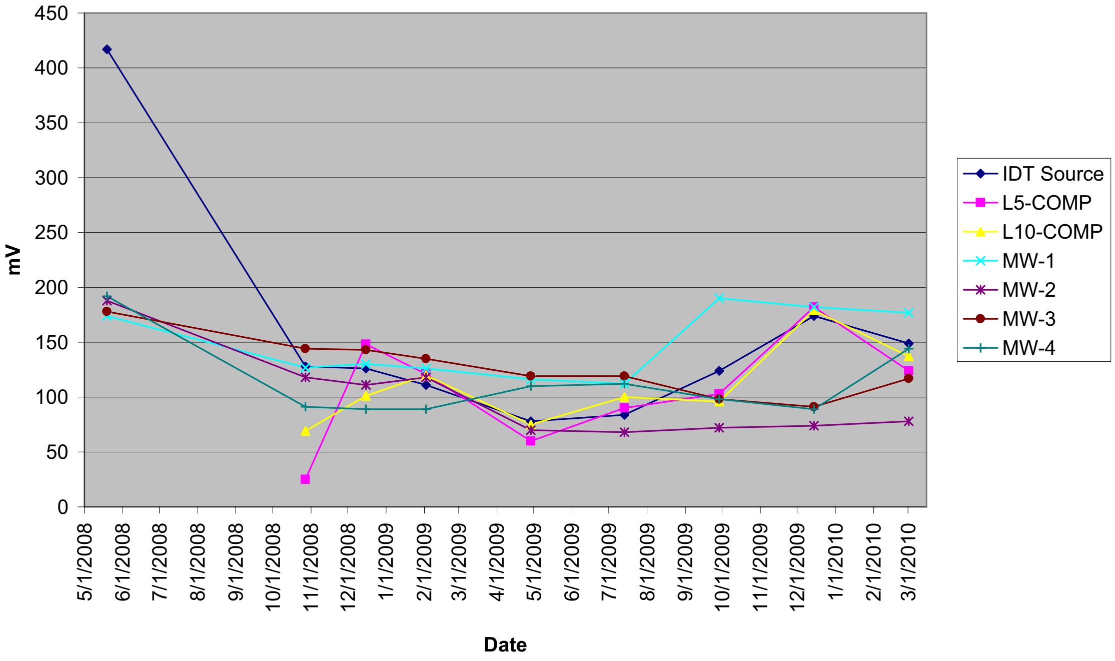


Figure III-4-7B ORP

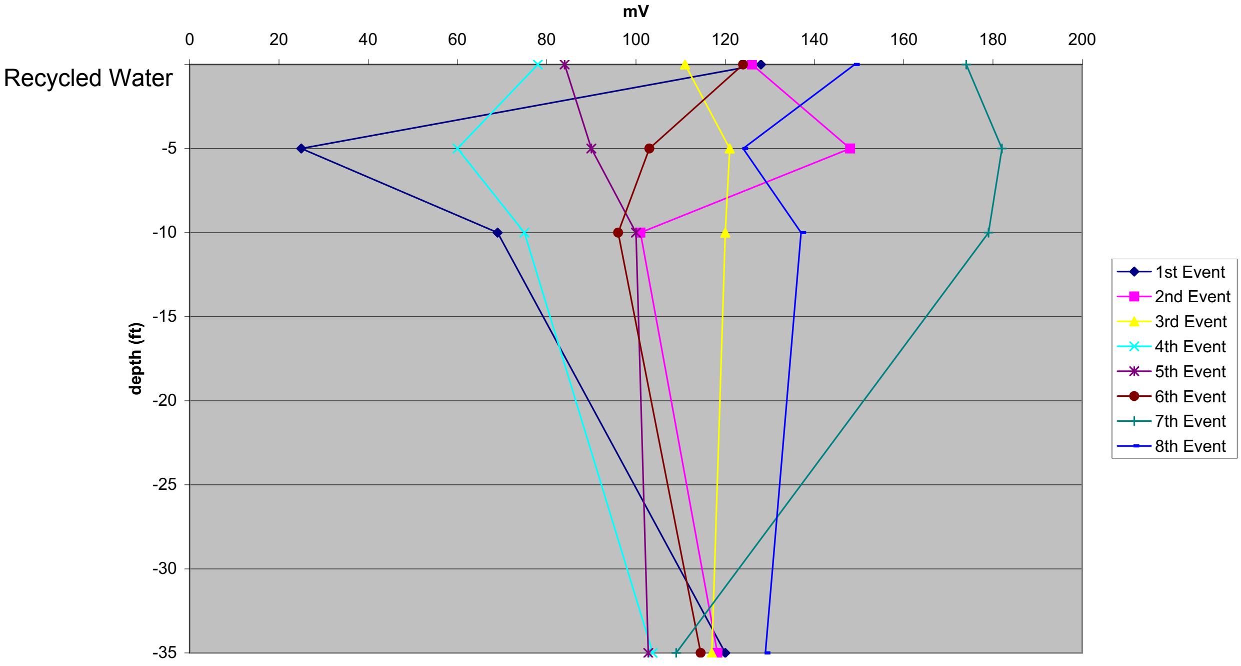
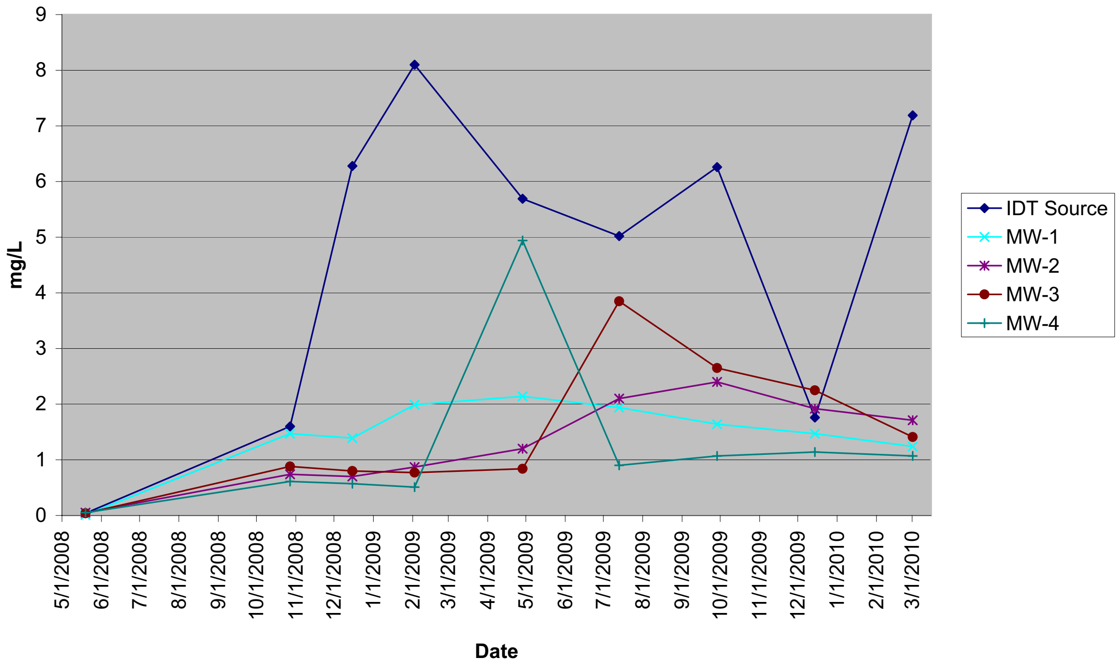


Figure III-4-8A Dissolved Oxygen



Note: non-detects are treated in the figure as zero.

Figure III-4-8B Dissolved Oxygen

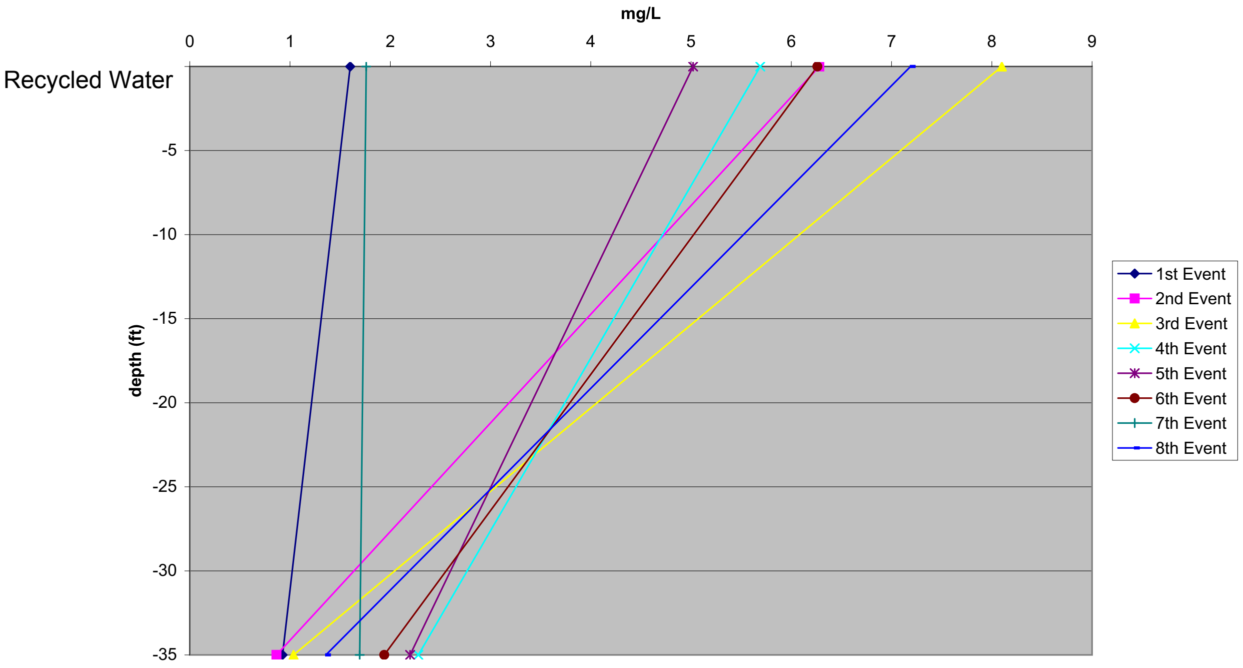


Figure III-4-9A Chlorine, Total

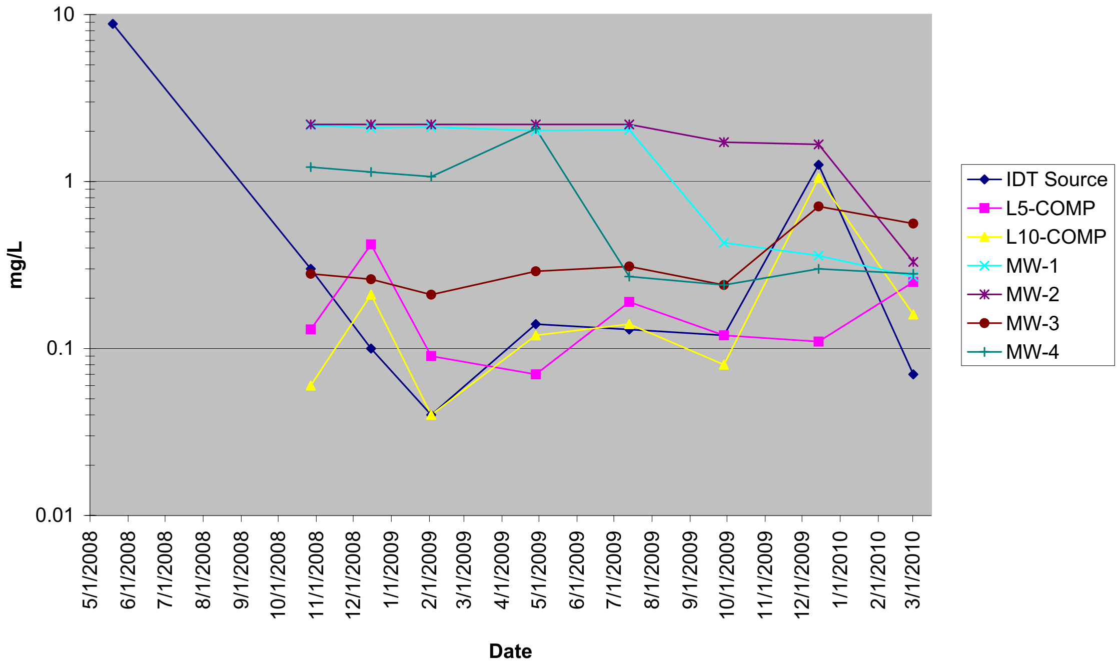


Figure III-4-9B Chlorine, Total

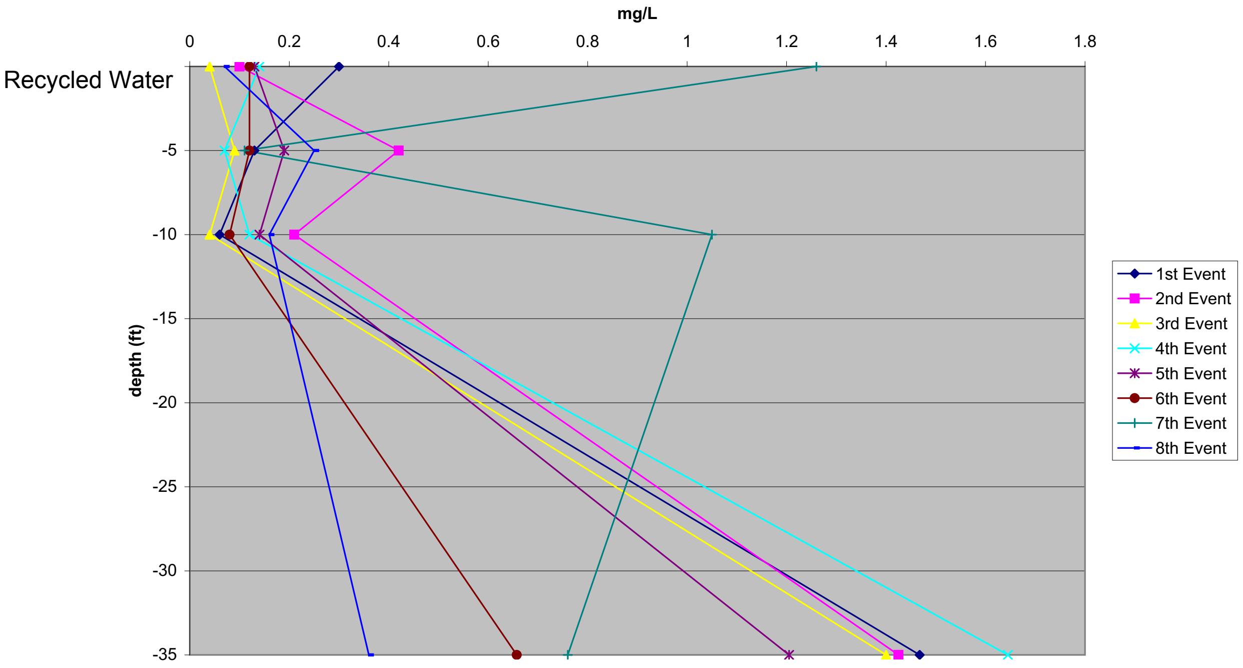


Figure III-4-10A Chloride

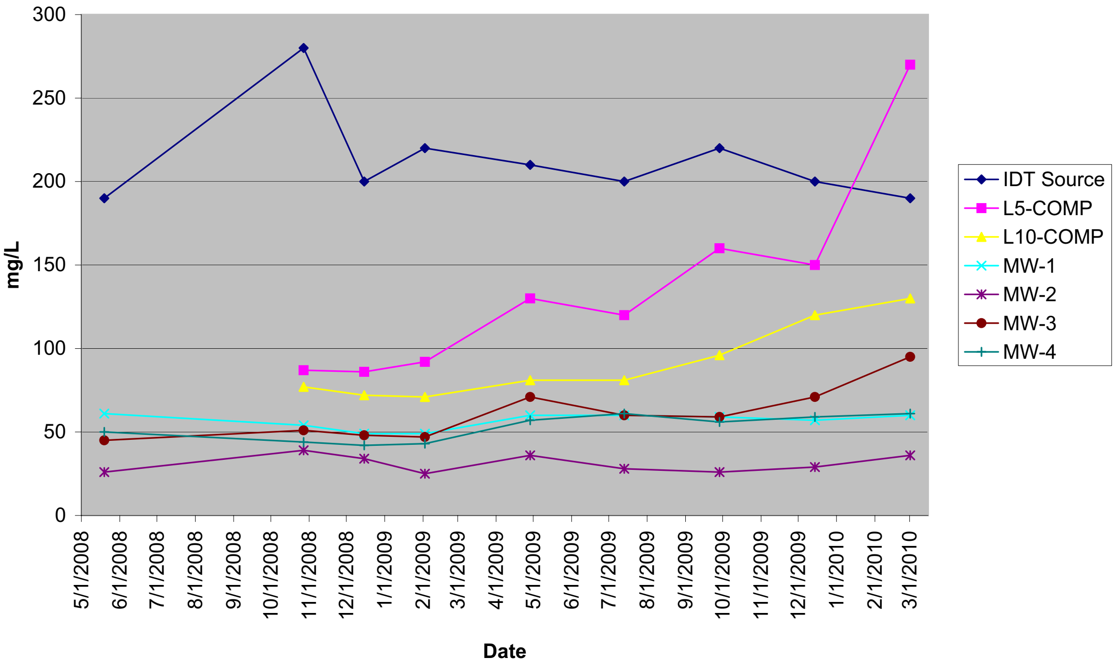


Figure III-4-10B Chloride

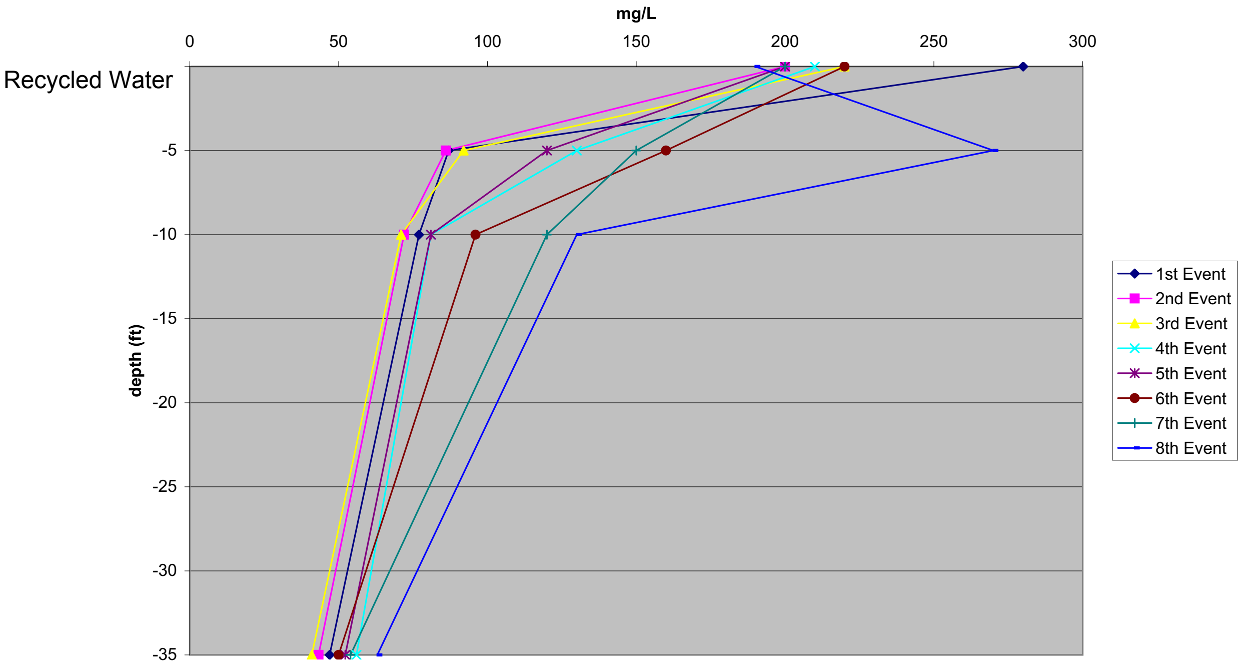


Figure III-4-11A Sulfate

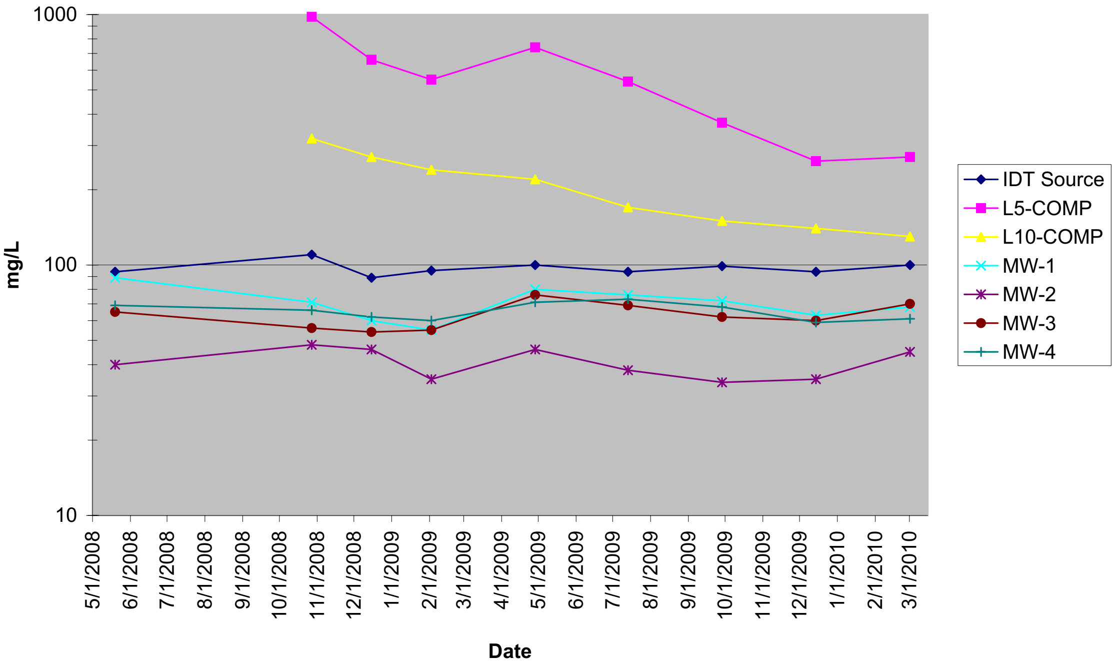


Figure III-4-11B Sulfate

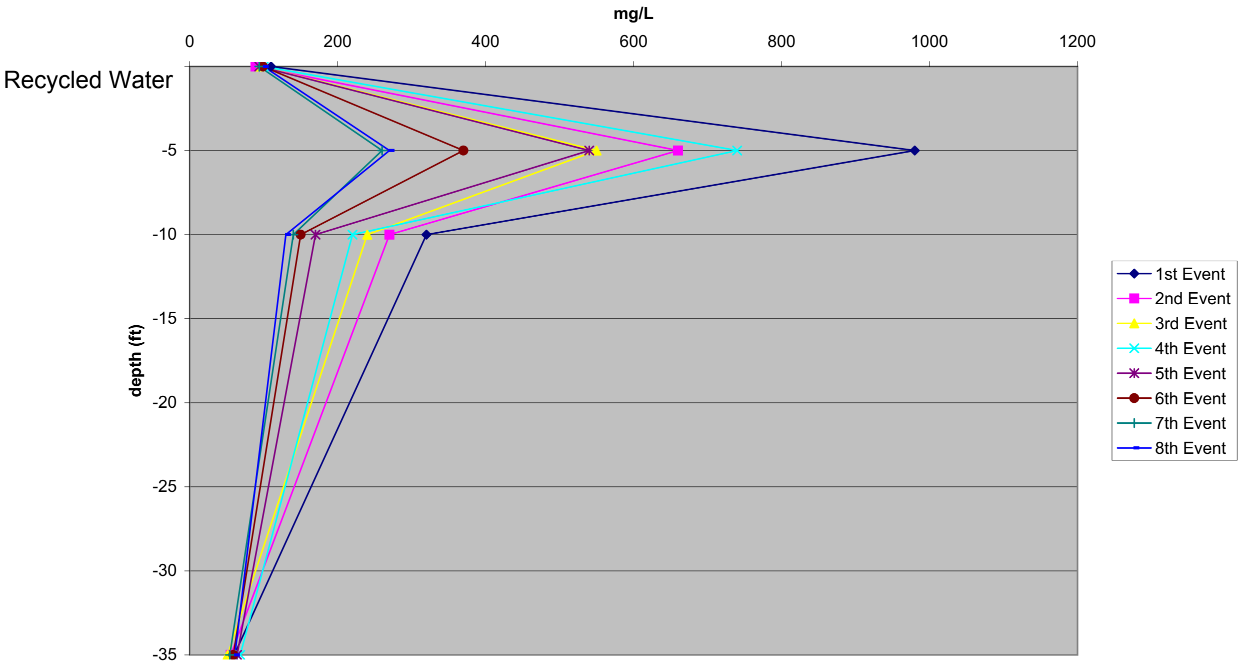
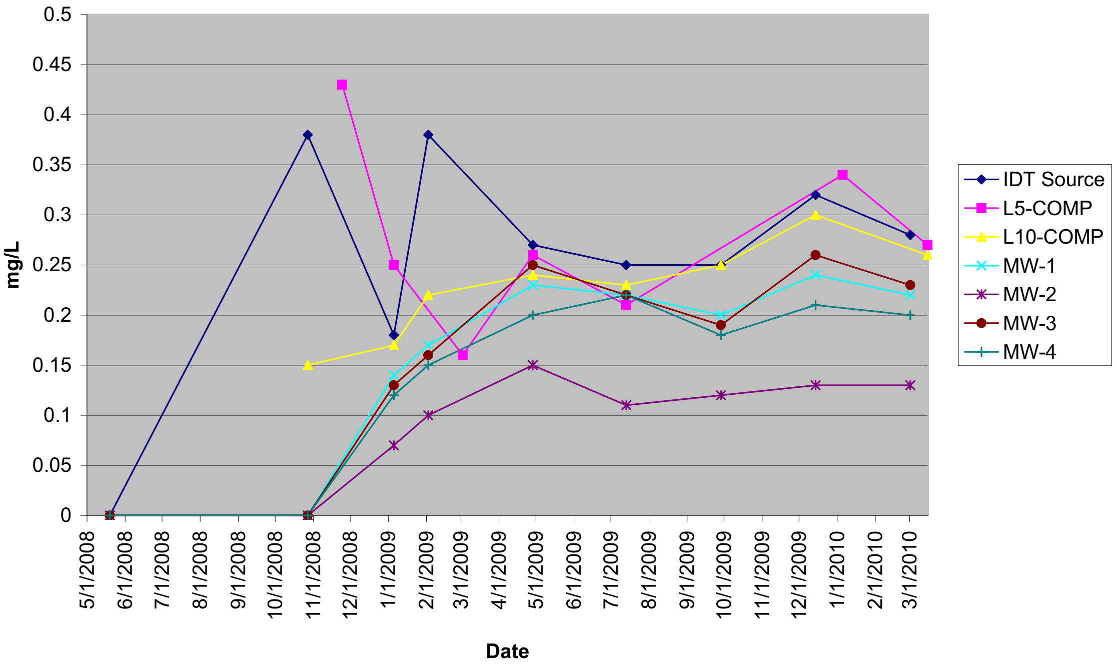
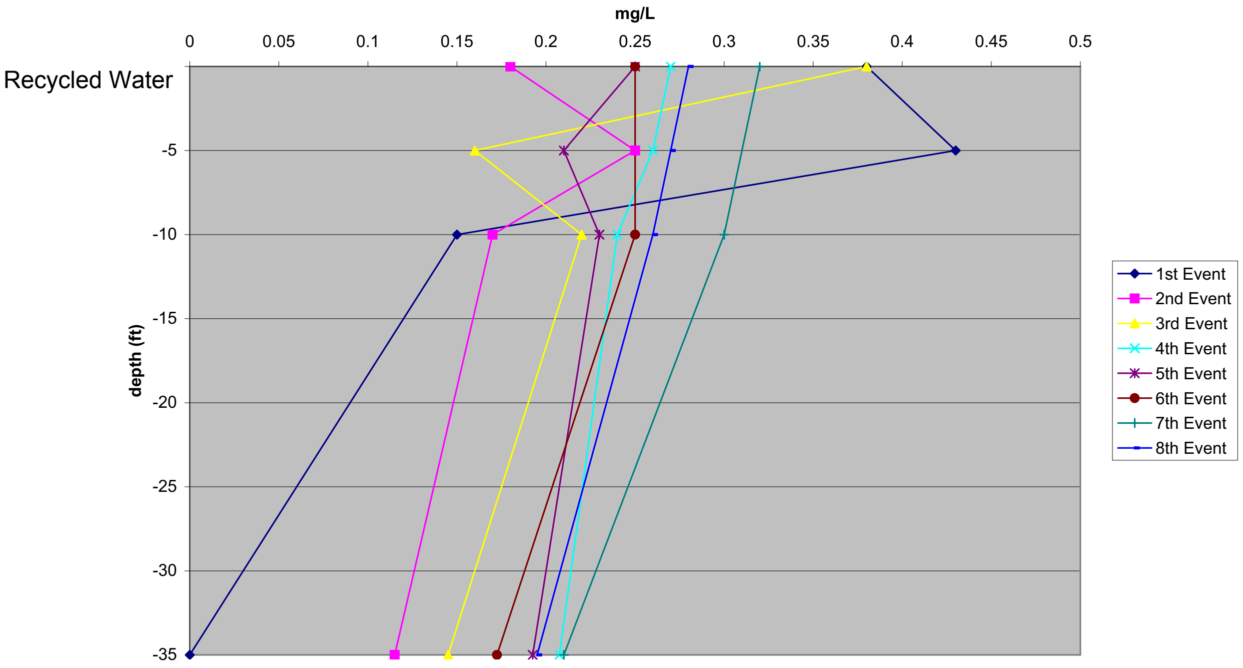


Figure III-4-12A Bromide



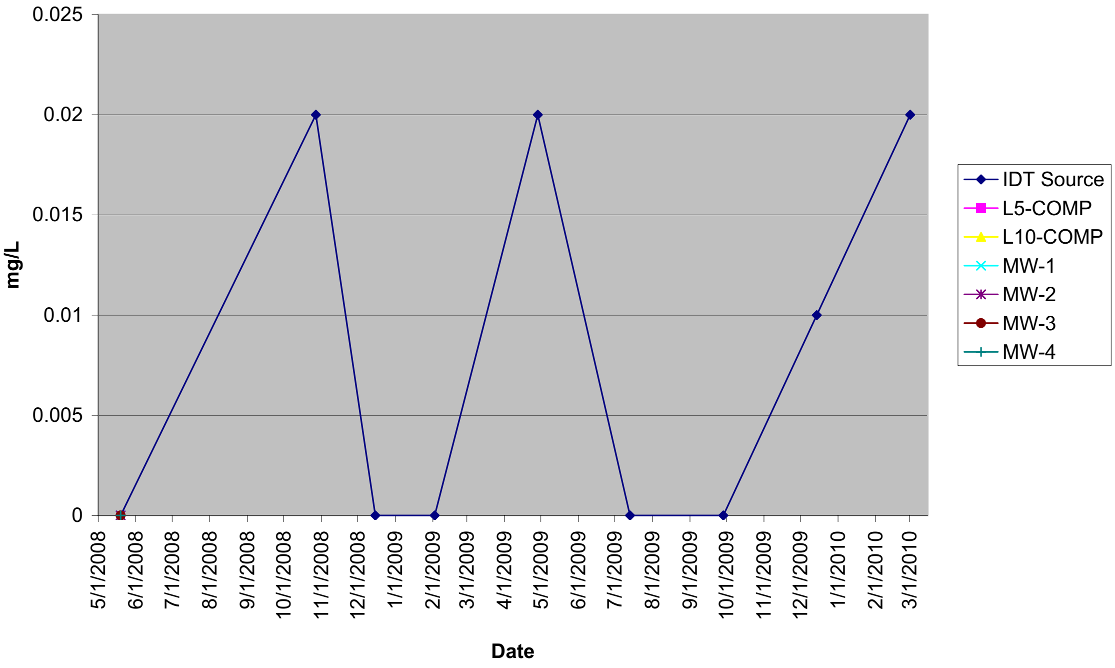
Note: non-detects are treated in the figure as zero.

Figure III-4-12B Bromide



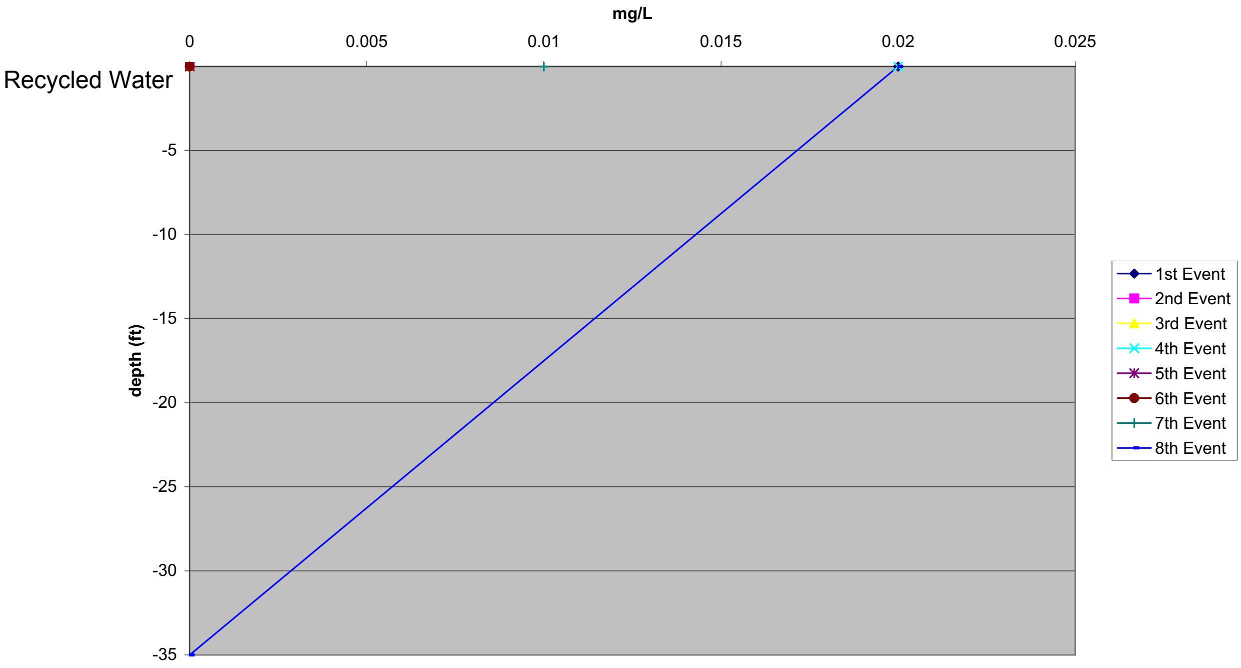
Note: non-detects are treated in the figure as zero.

Figure III-4-13A Cyanide



Note: non-detects are treated in the figure as zero.

Figure III-4-13B Cyanide



Note: non-detects are treated in the figure as zero.

Figure III-4-14A Boron

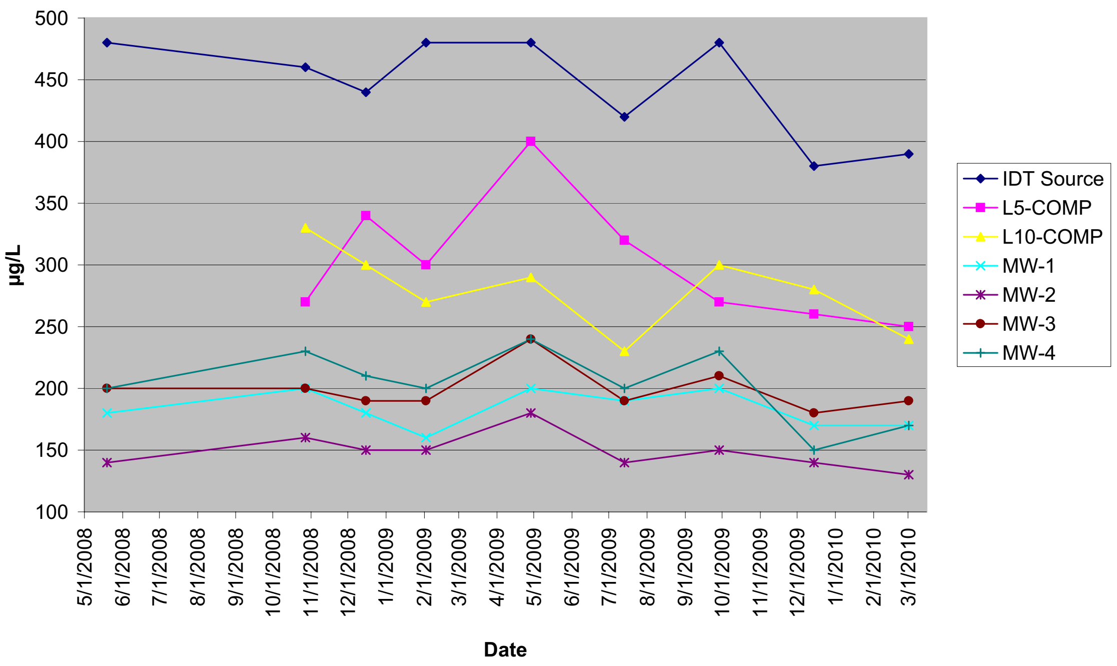


Figure III-4-14B Boron

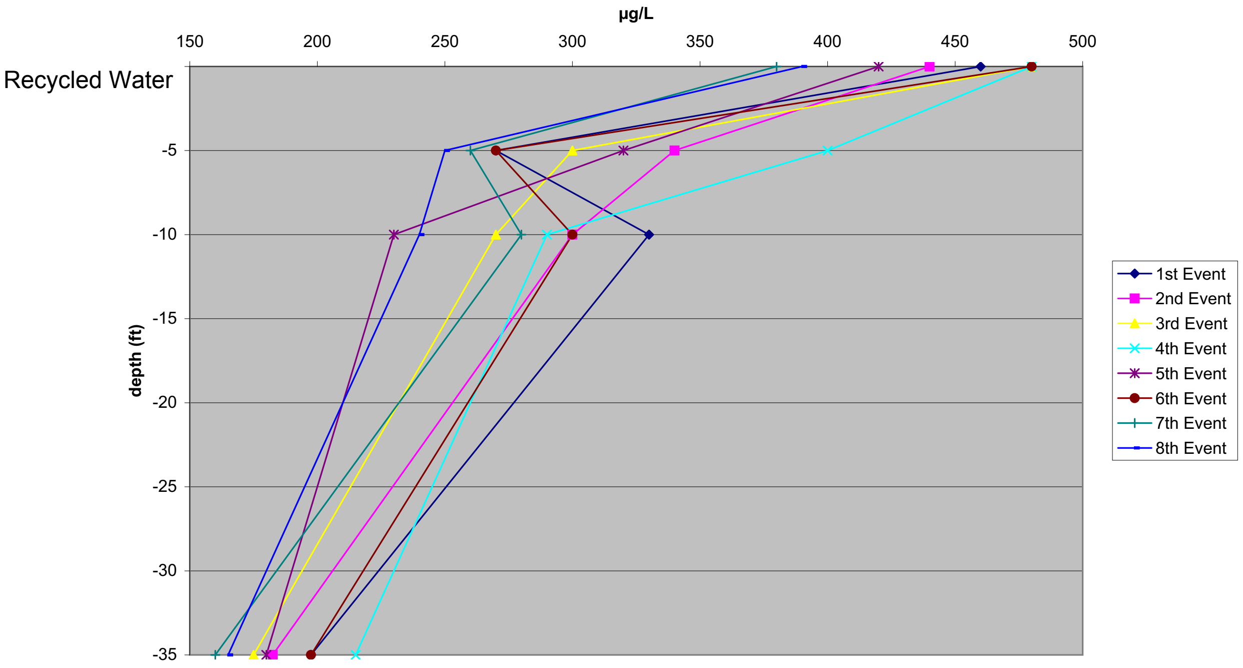
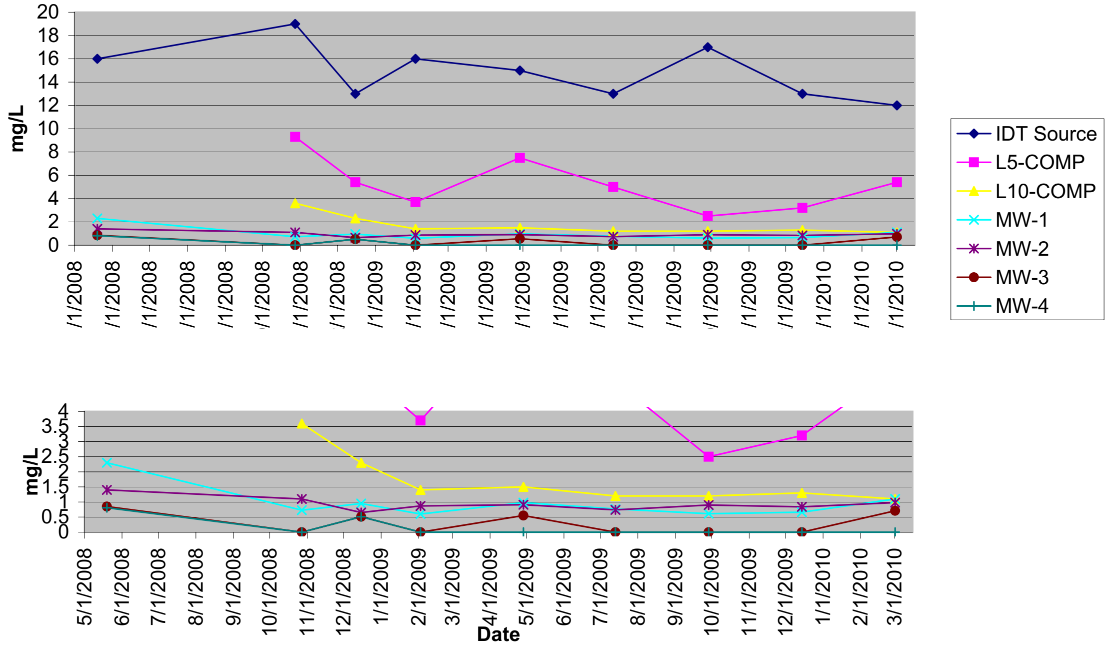
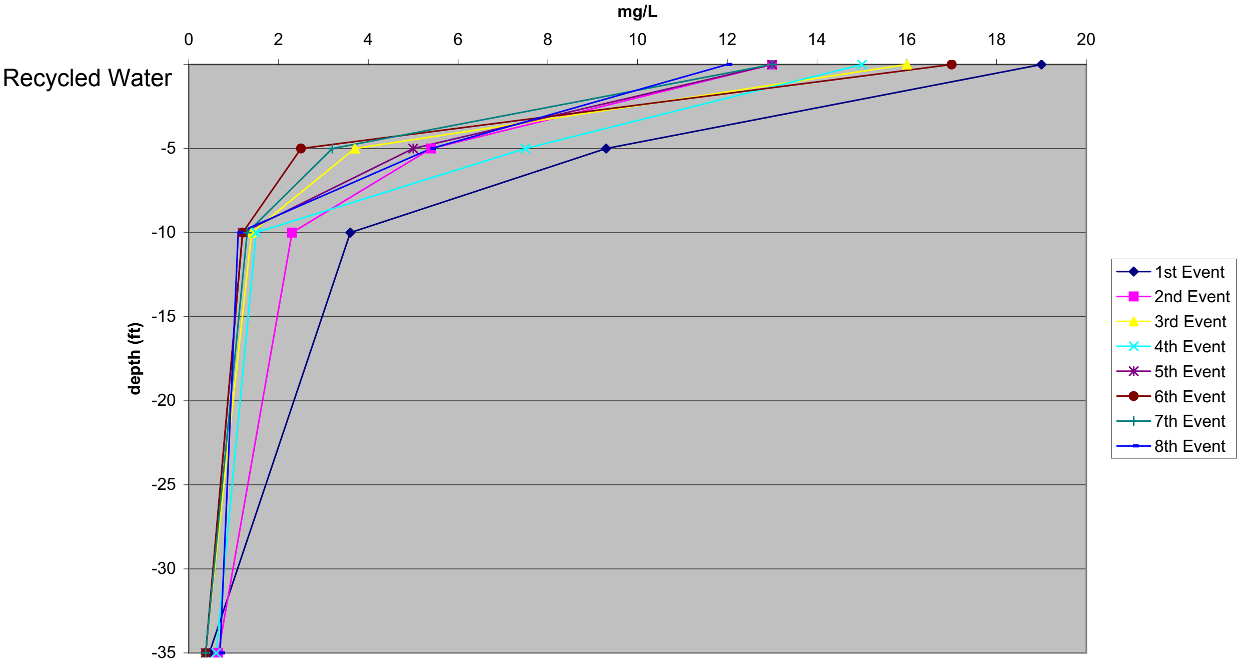


Figure III-4-15A Potassium



Note: non-detects are treated in the figure as zero.

Figure III-4-15B Potassium



Note: non-detects are treated in the figure as zero.

Figure III-4-16A Calcium

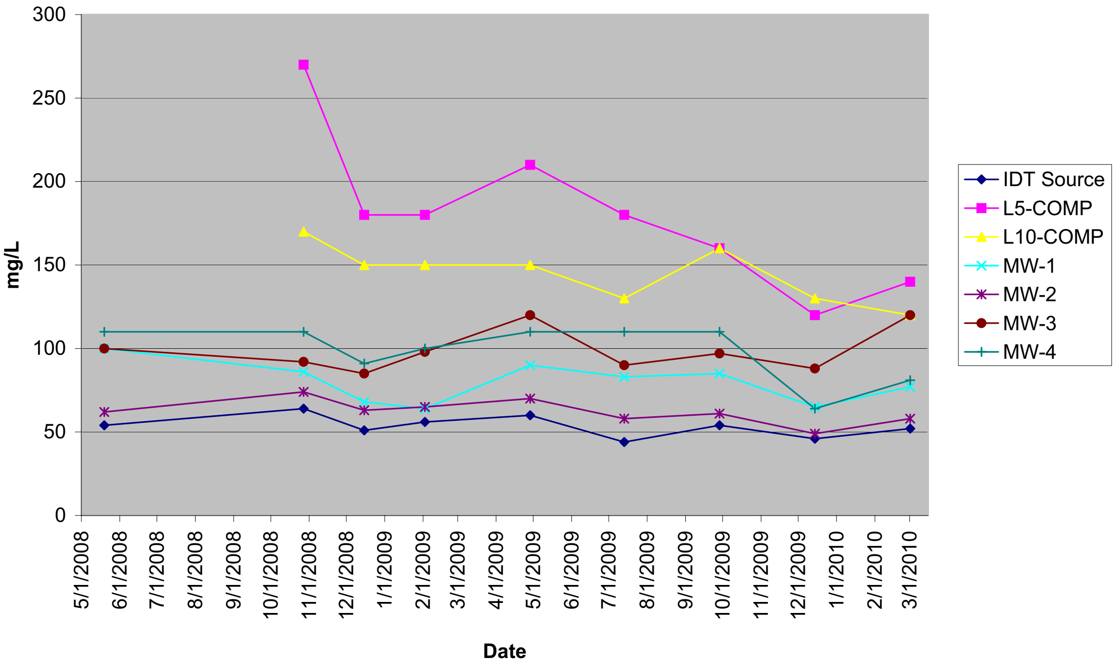


Figure III-4-16B Calcium

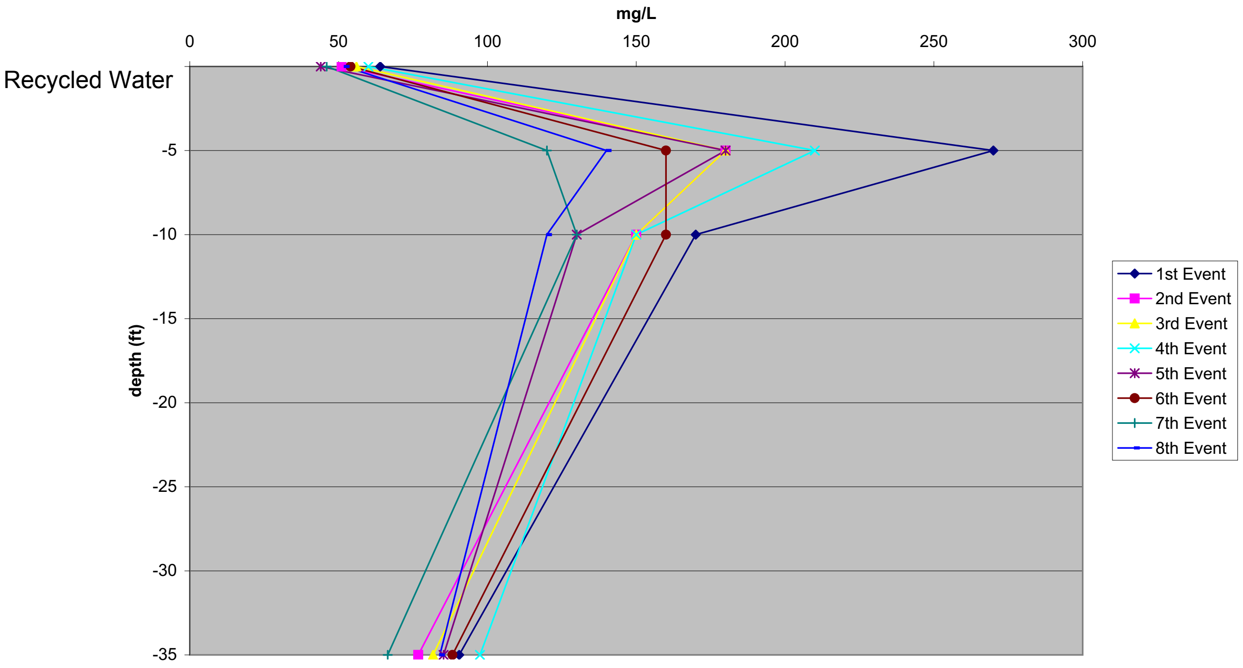


Figure III-4-17A Magnesium

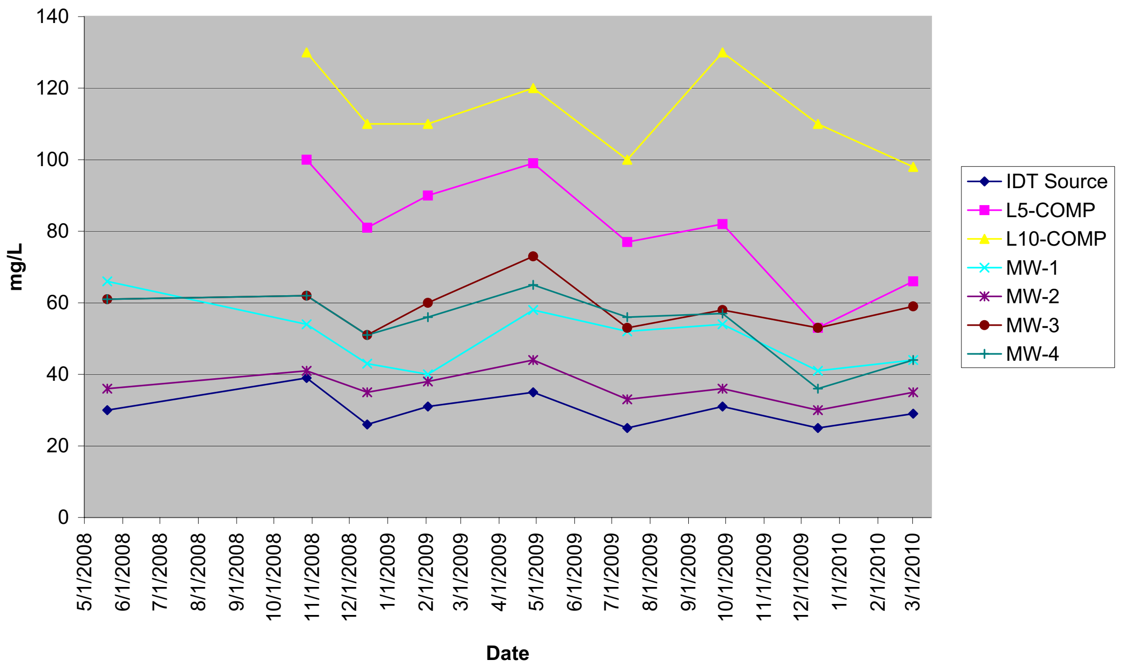


Figure III-4-17B Magnesium

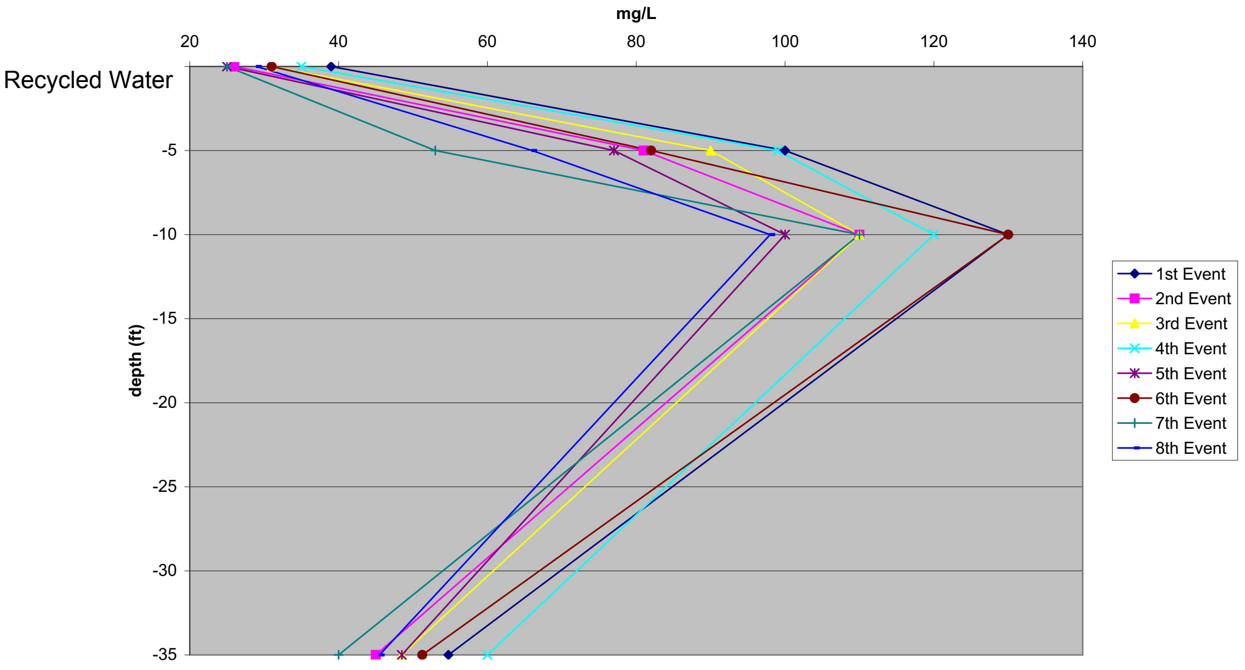


Figure III-4-18A Sodium

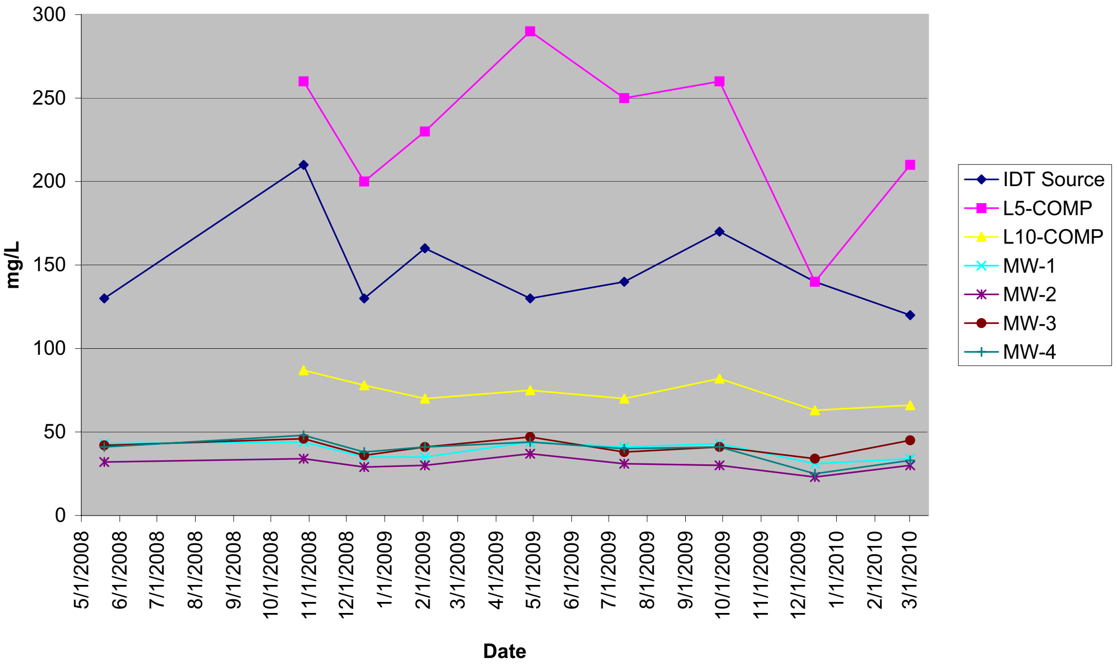


Figure III-4-18B Sodium

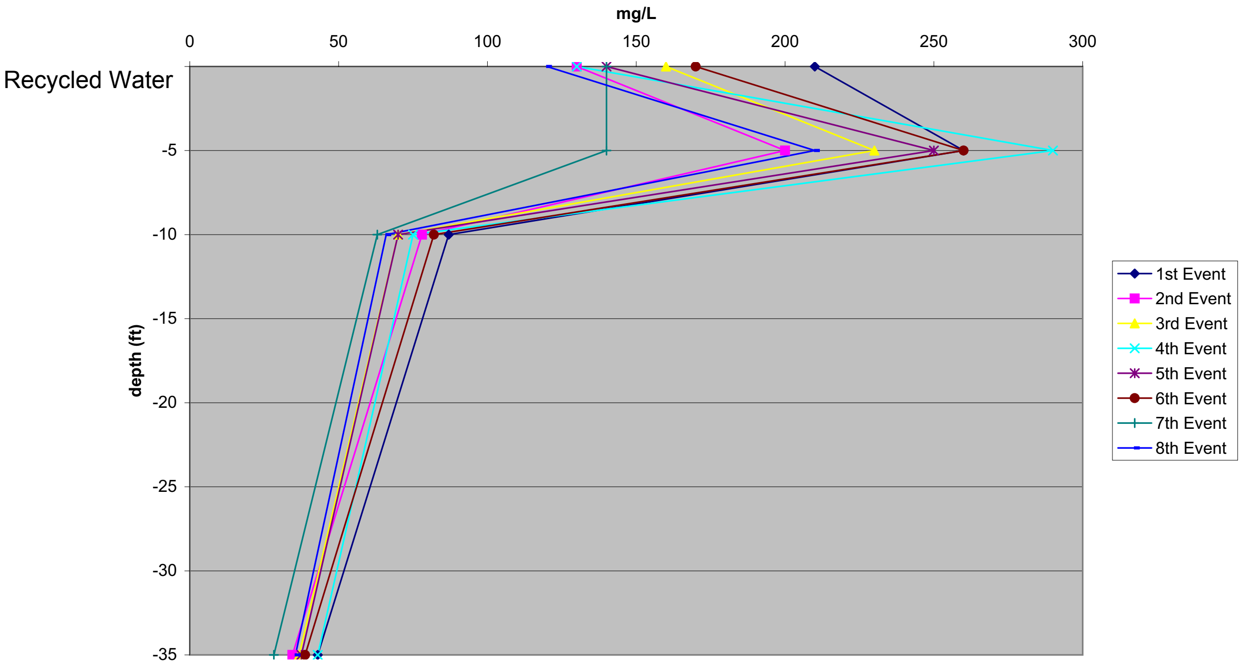


Figure III-4-19A Sodium Adsorption Ratio

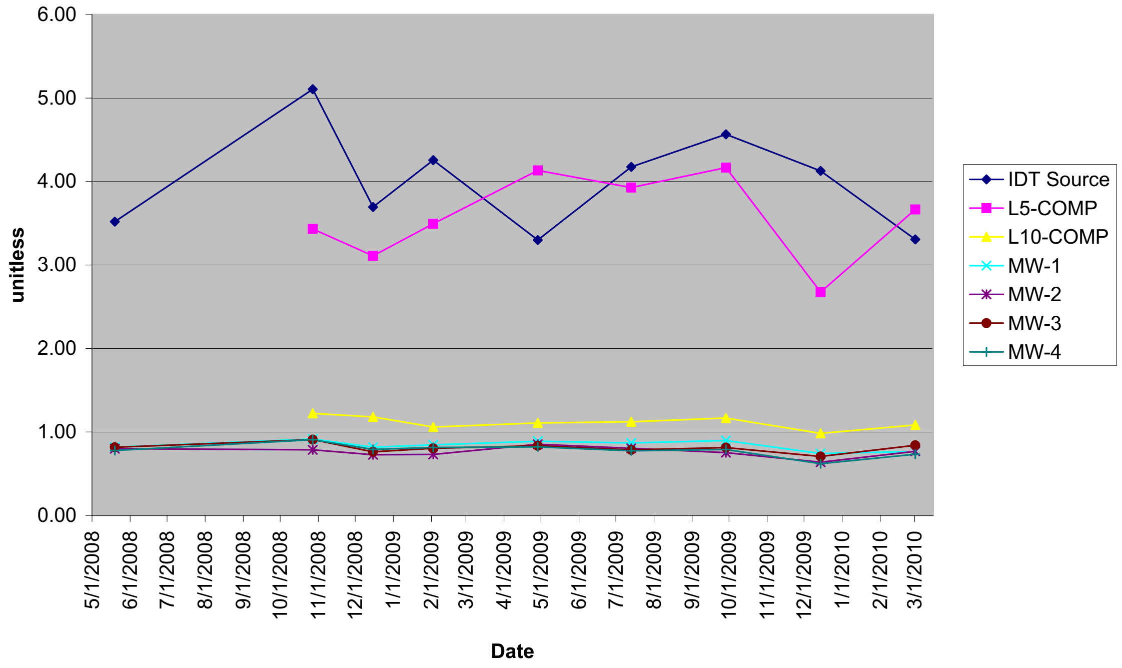


Figure III-4-19B Sodium Adsorption Ratio

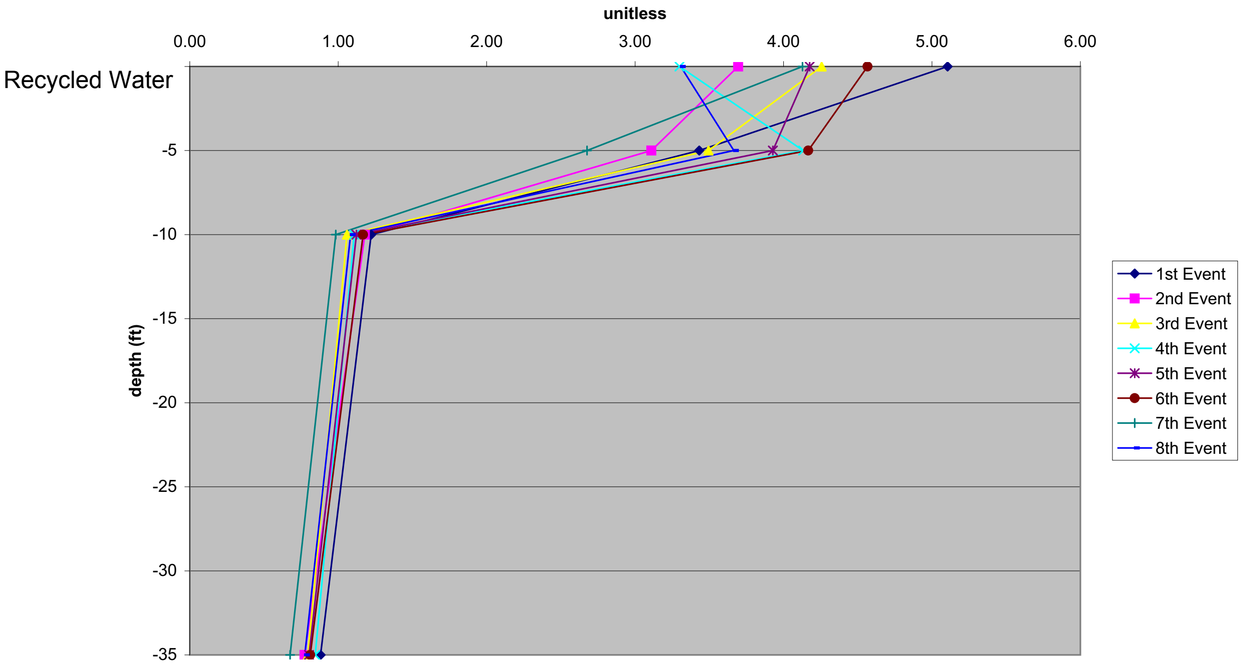
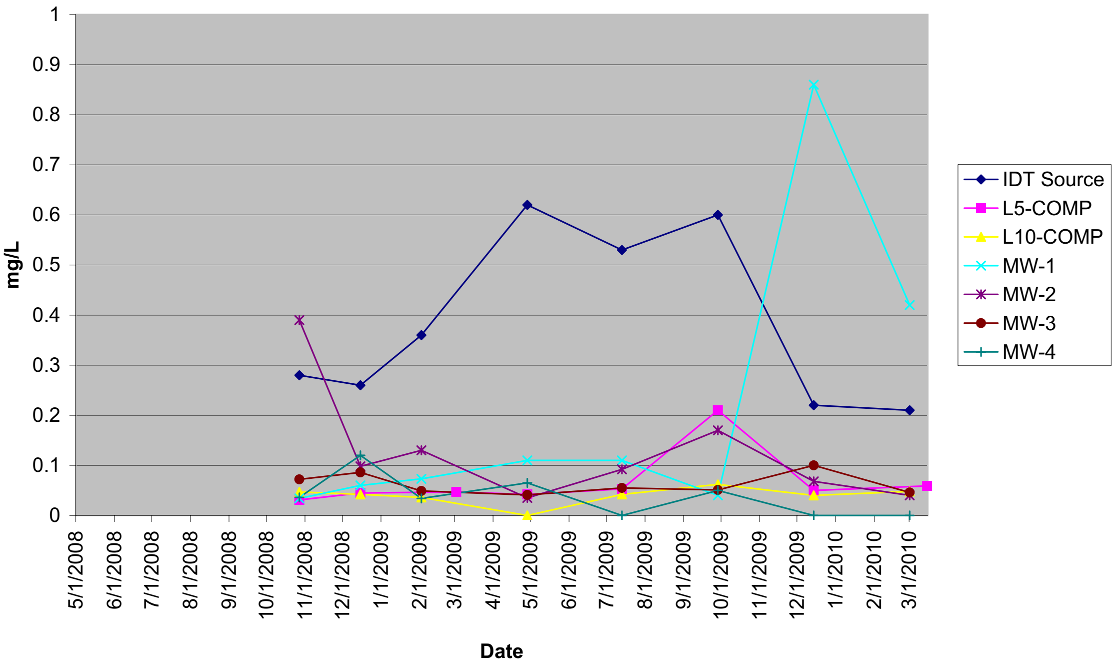
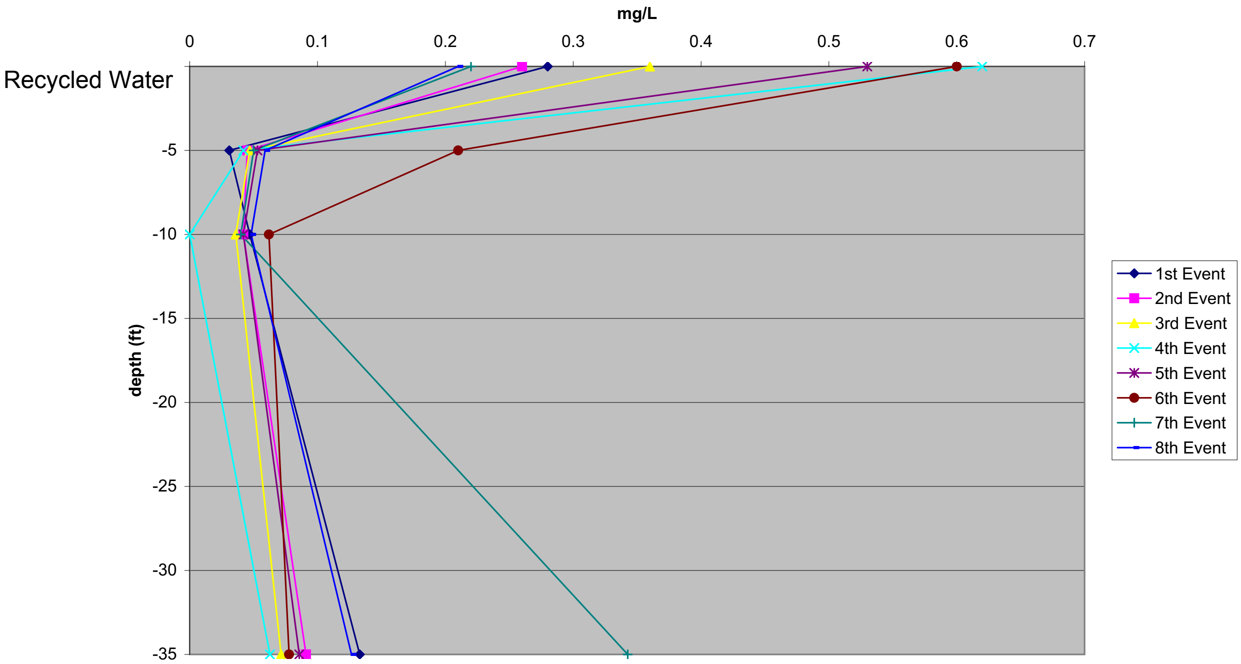


Figure III-4-20A Phosphorus, Total as P



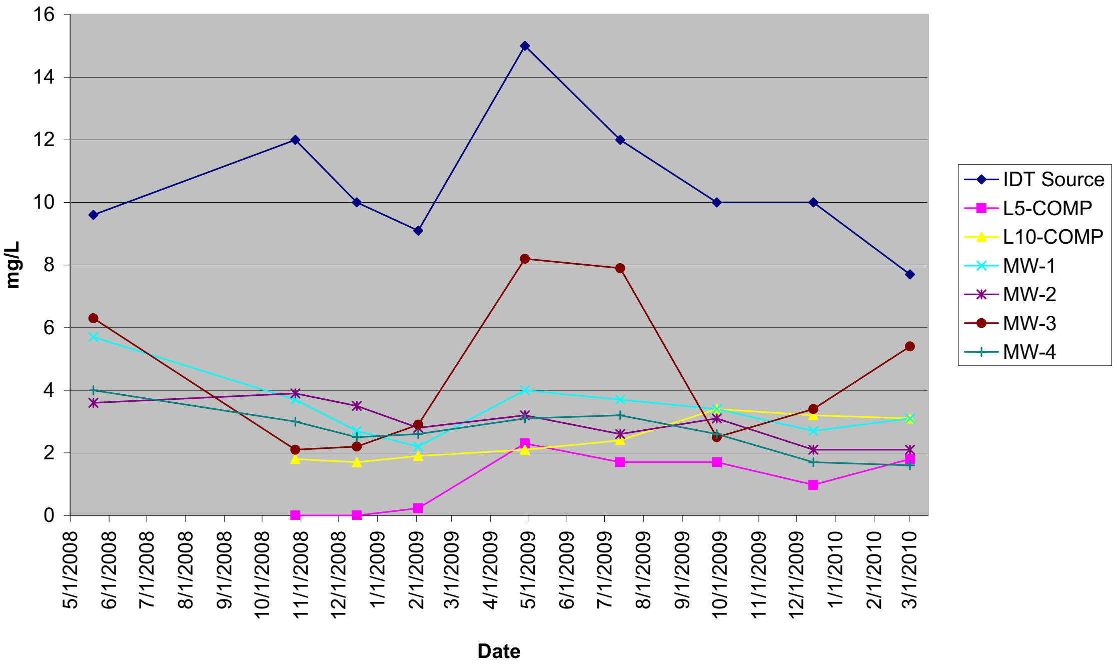
Note: non-detects are treated in the figure as zero.

Figure III-4-20B Phosphorus, Total as P



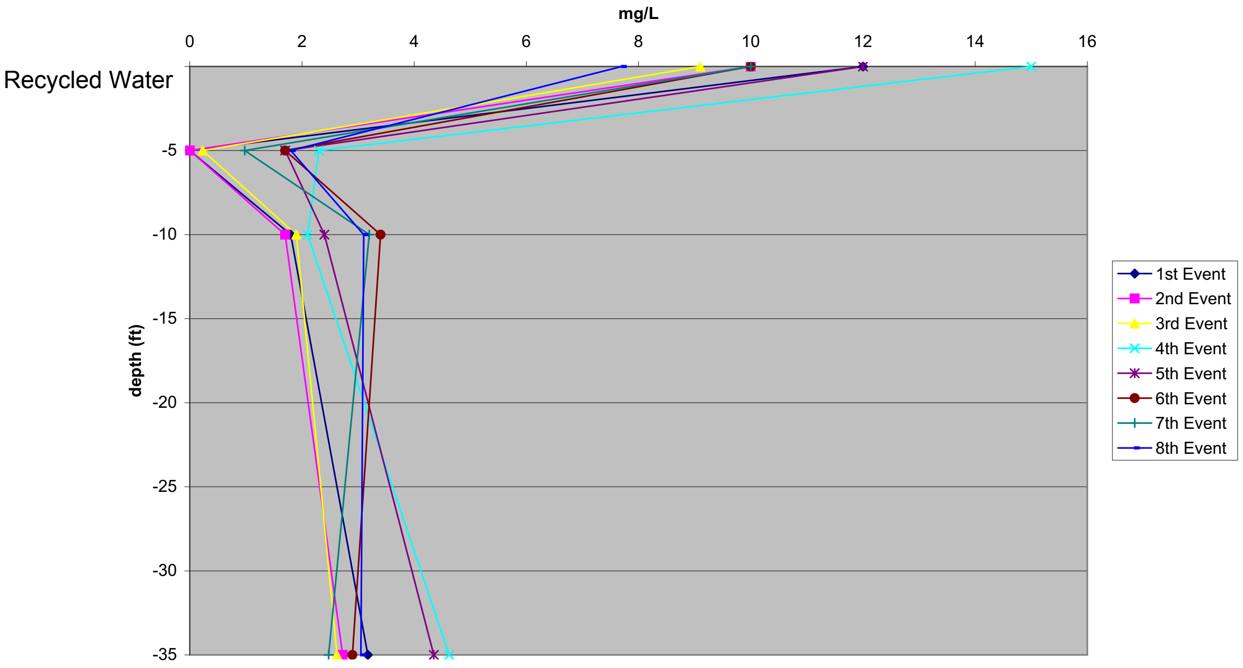
Note: non-detects are treated in the figure as zero.

Figure III-4-21A Nitrate as N



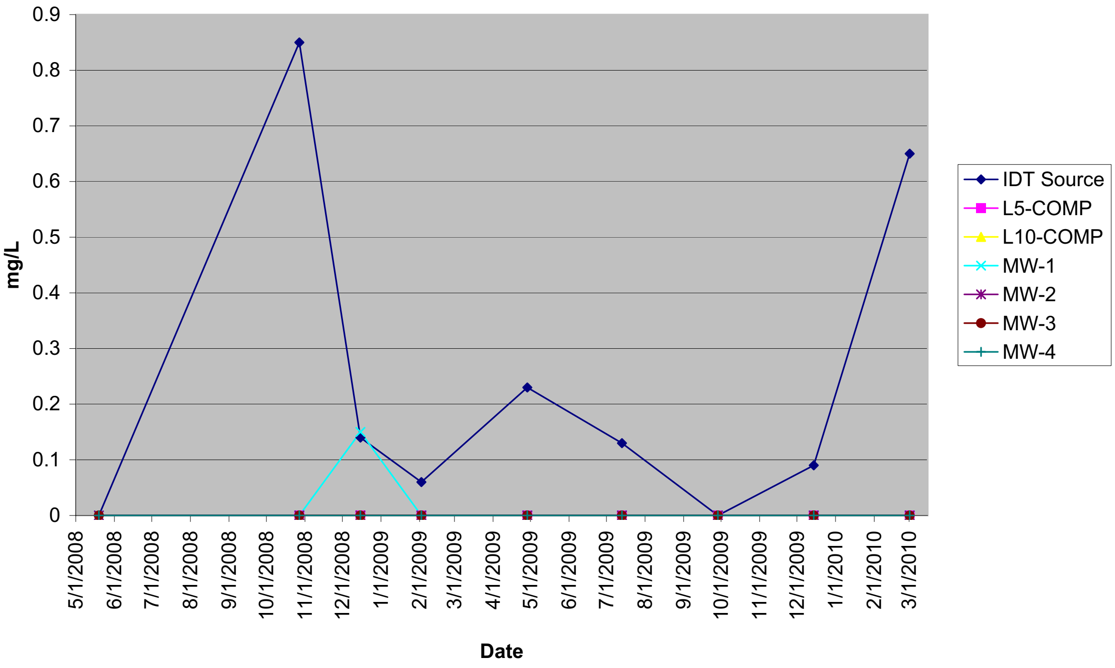
Note: non-detects are treated in the figure as zero.

Figure III-4-21B Nitrate as N



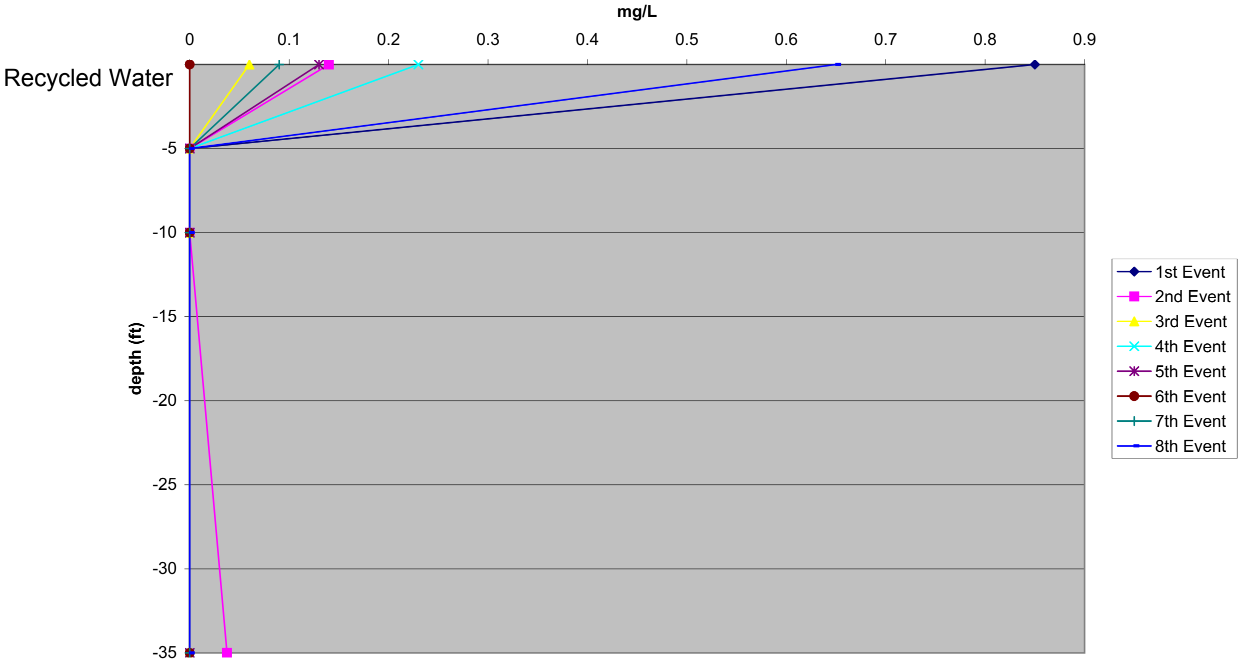
Note: non-detects are treated in the figure as zero.

Figure III-4-22A Nitrite as N



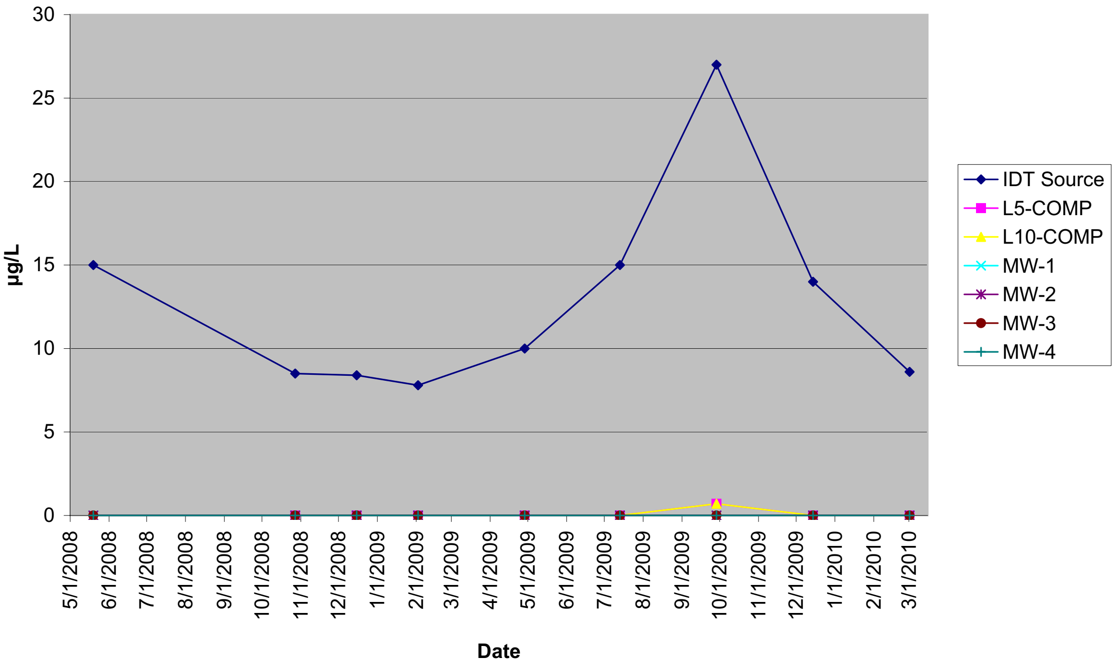
Note: non-detects are treated in the figure as zero.

Figure III-4-22B Nitrite as N



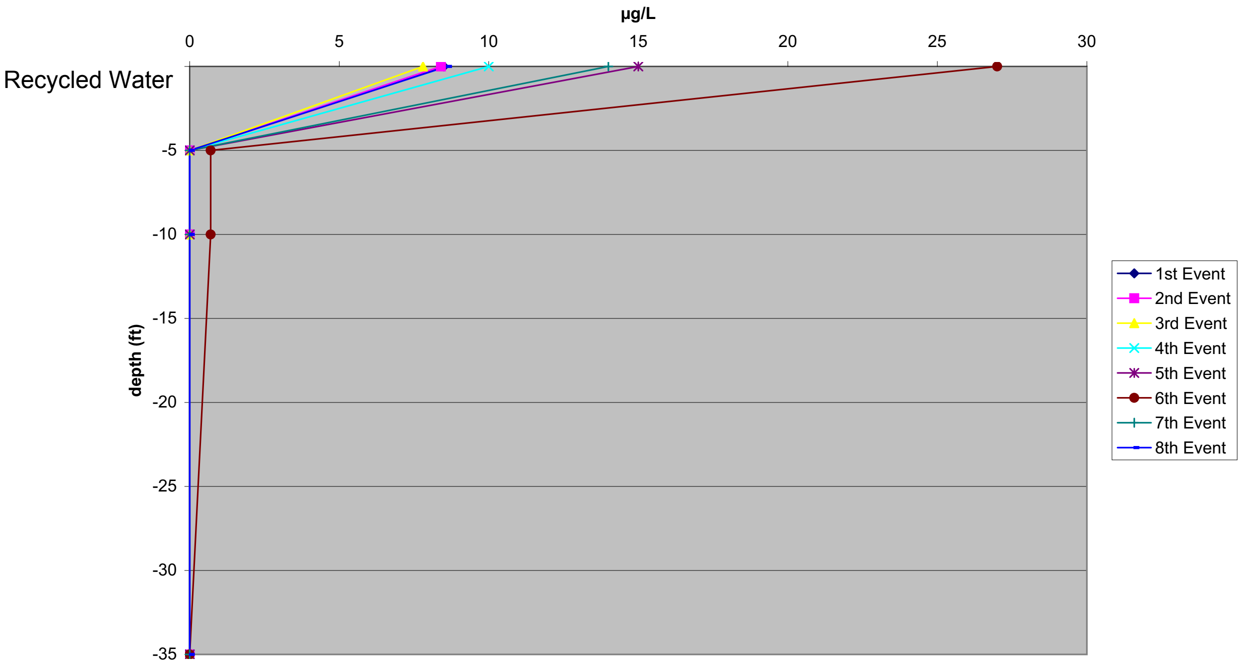
Note: non-detects are treated in the figure as zero.

Figure III-4-23A Bromodichloromethane



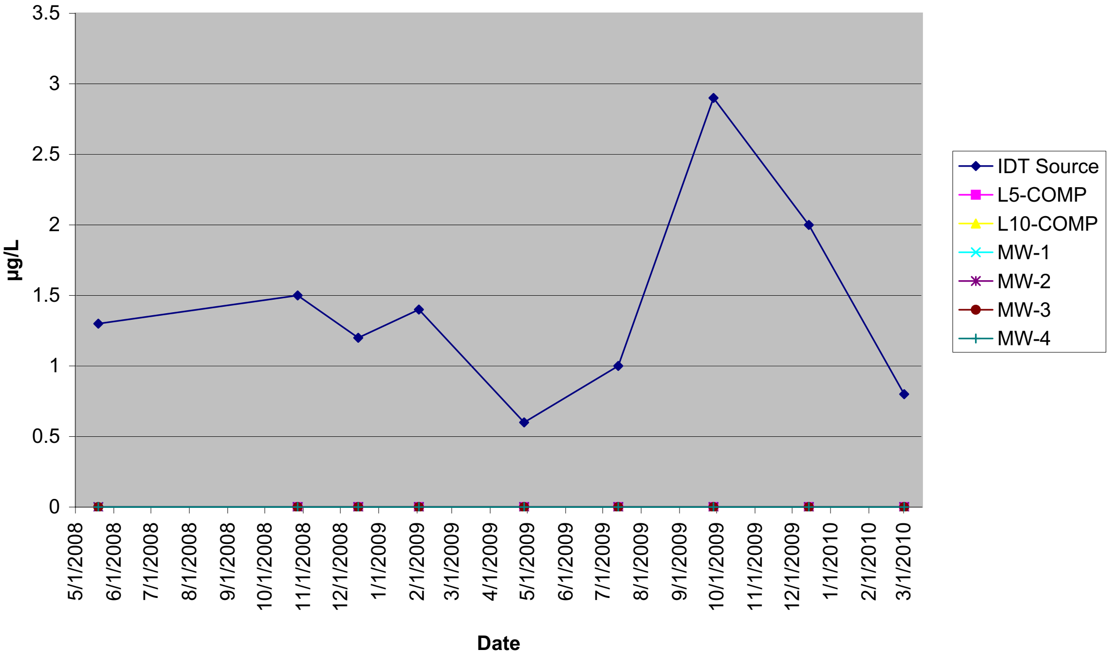
Note: non-detects are treated in the figure as zero.

Figure III-4-23B Bromodichloromethane



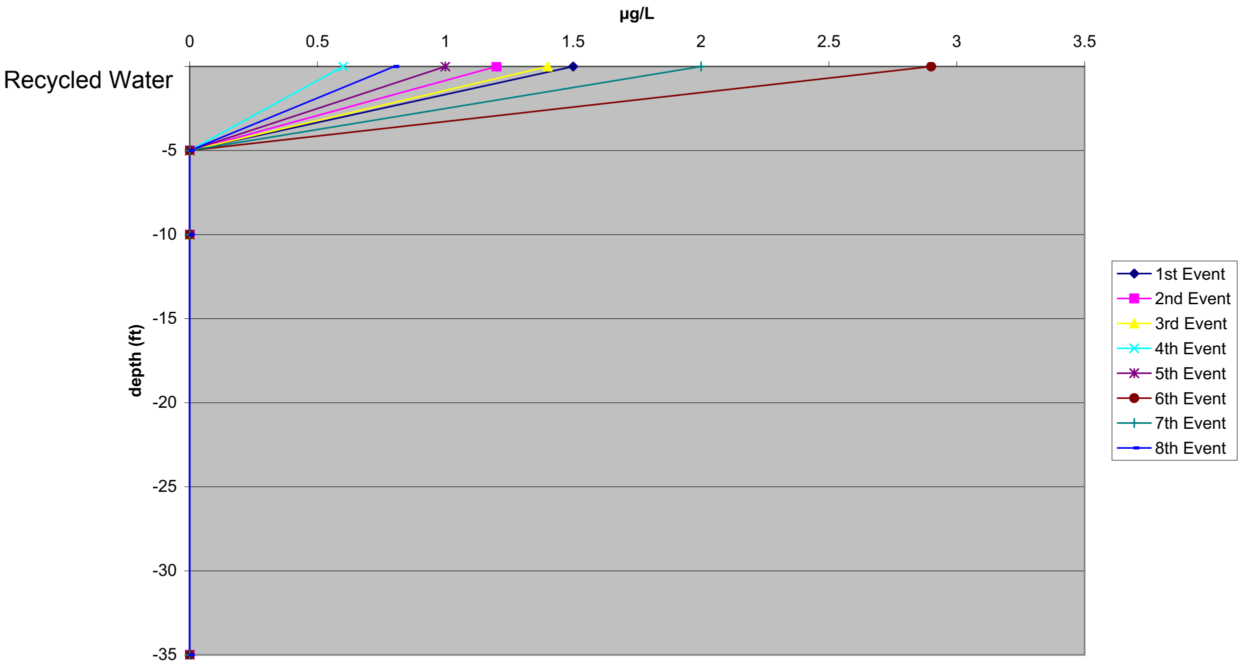
Note: non-detects are treated in the figure as zero.

Figure III-4-24A Bromoform



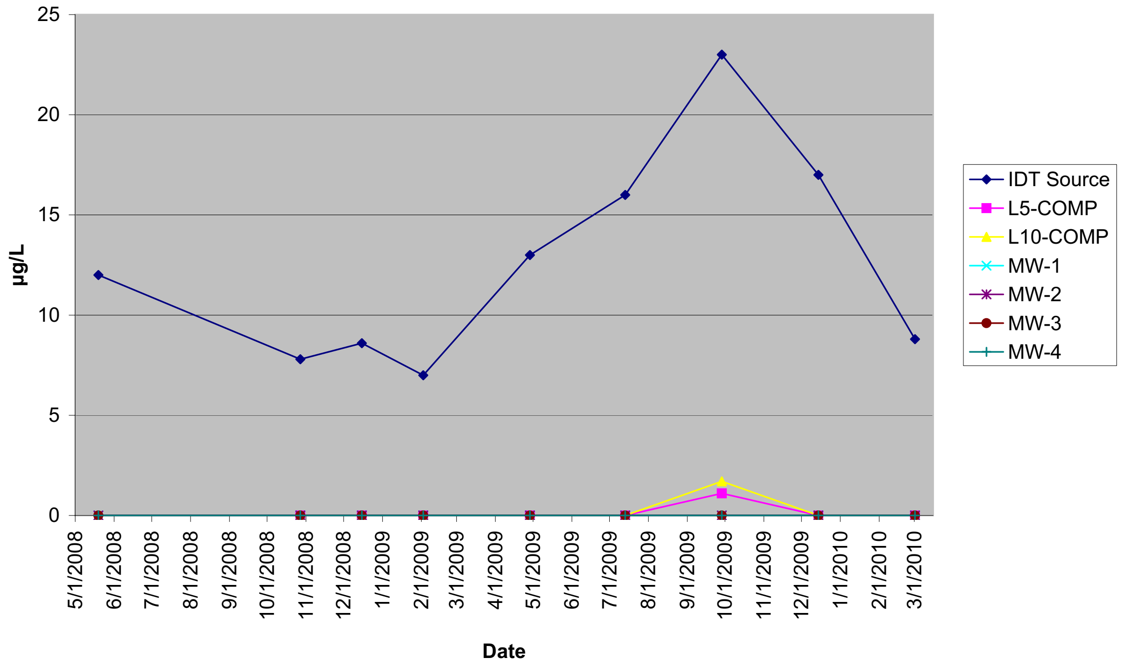
Note: non-detects are treated in the figure as zero.

Figure III-4-24B Bromoform



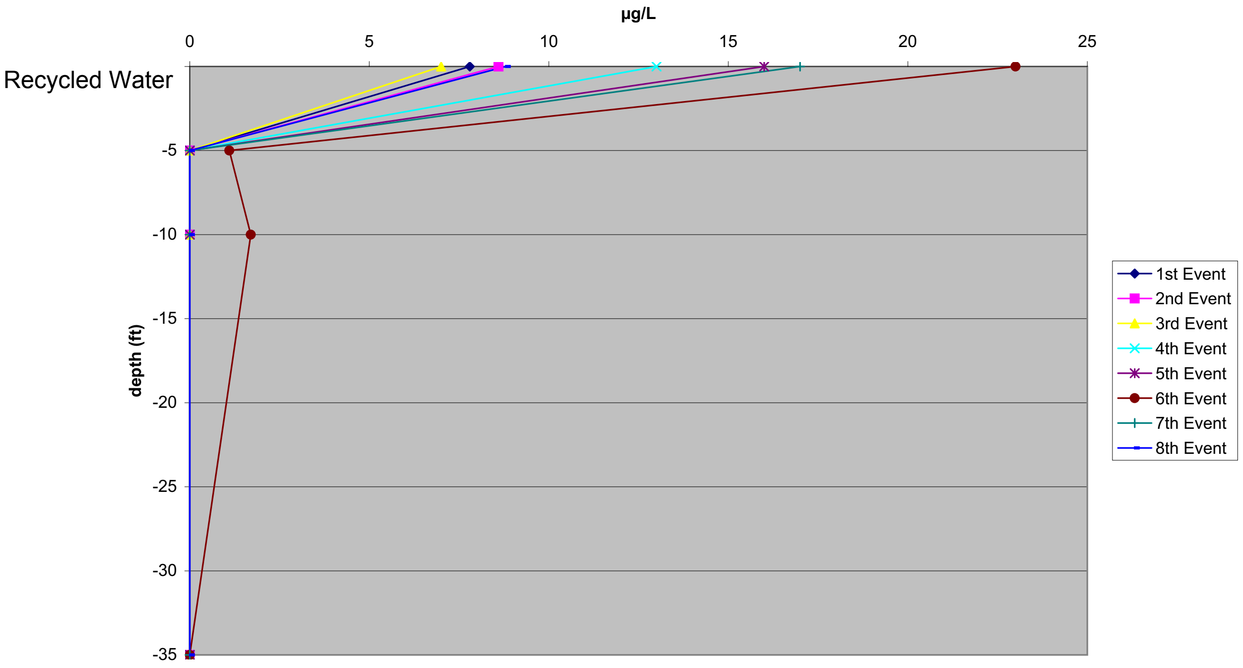
Note: non-detects are treated in the figure as zero.

Figure III-4-25A Chloroform

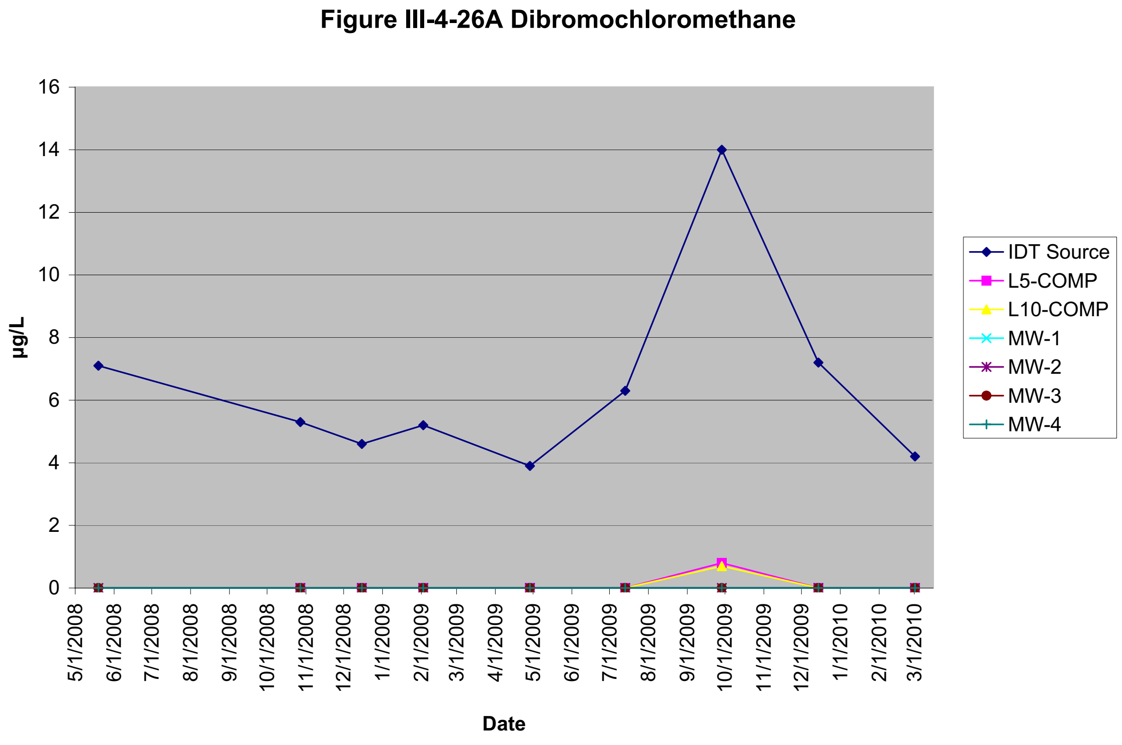


Note: non-detects are treated in the figure as zero.

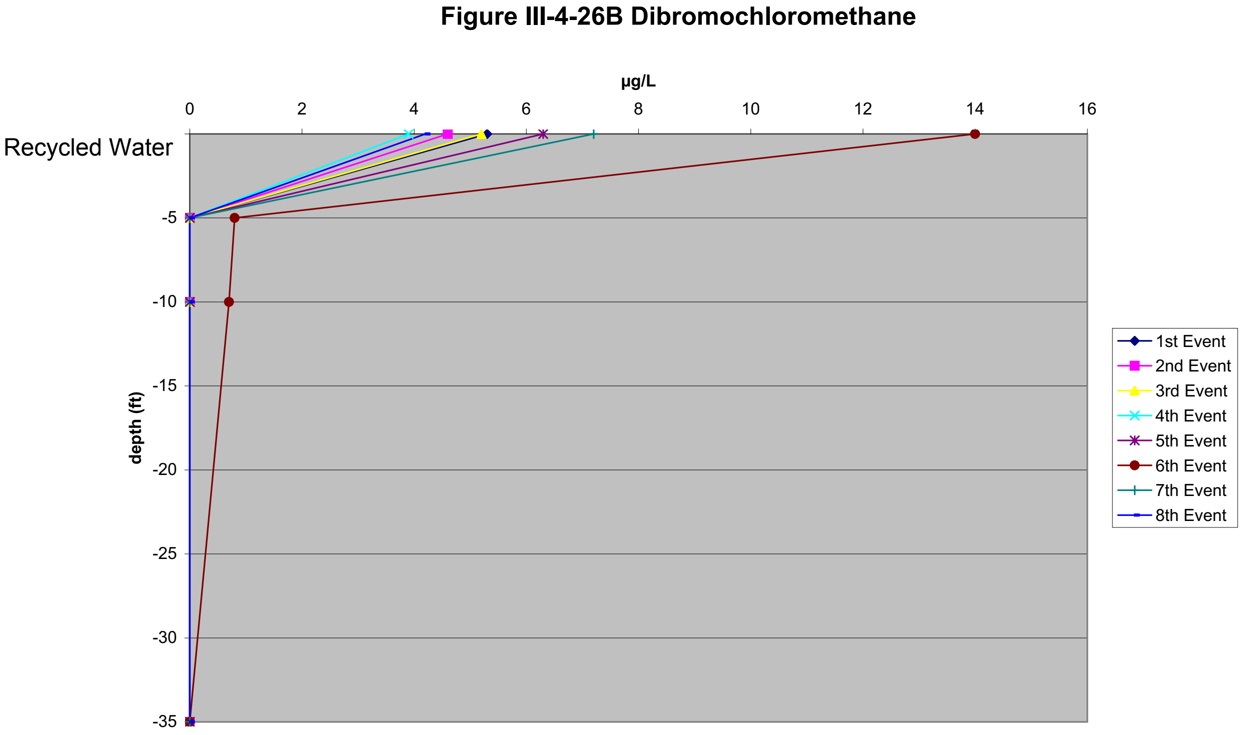
Figure III-4-25B Chloroform



Note: non-detects are treated in the figure as zero.

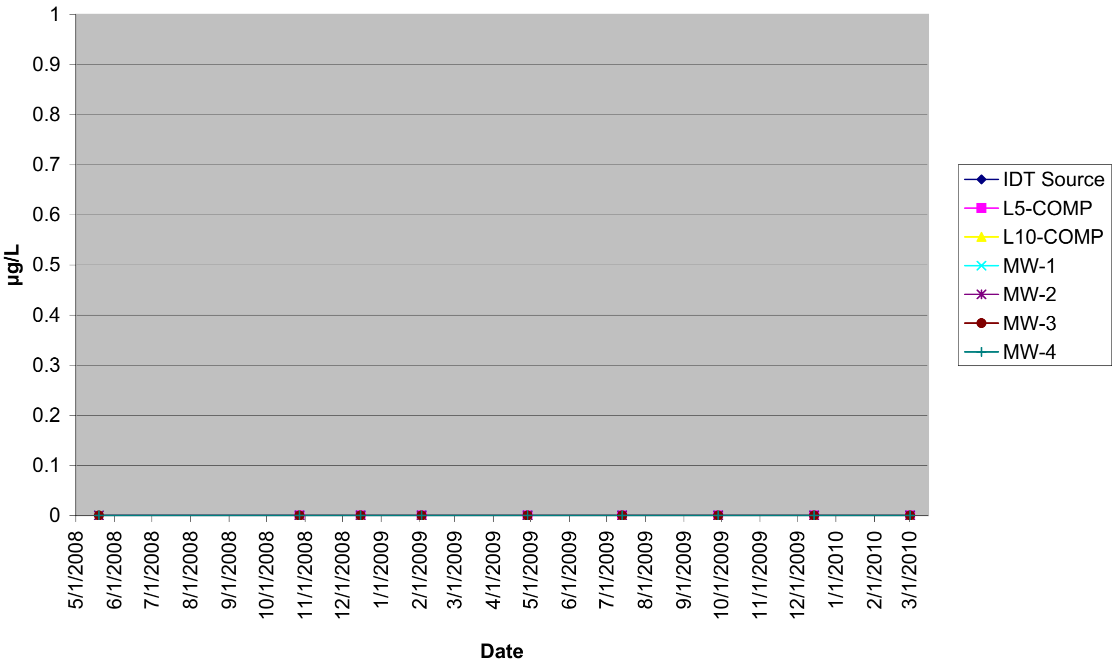


Note: non-detects are treated in the figure as zero.



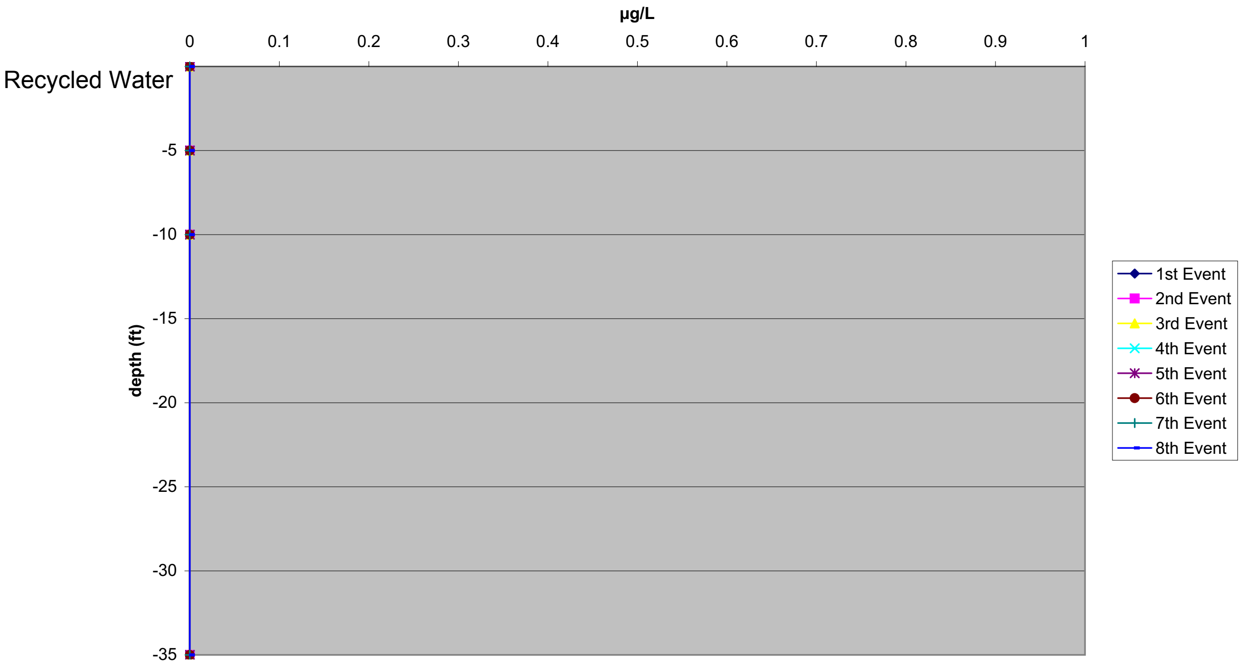
Note: non-detects are treated in the figure as zero.

Figure III-4-27A Carbon Tetrachloride



Note: non-detects are treated in the figure as zero.

Figure III-4-27B Carbon Tetrachloride



Note: non-detects are treated in the figure as zero.

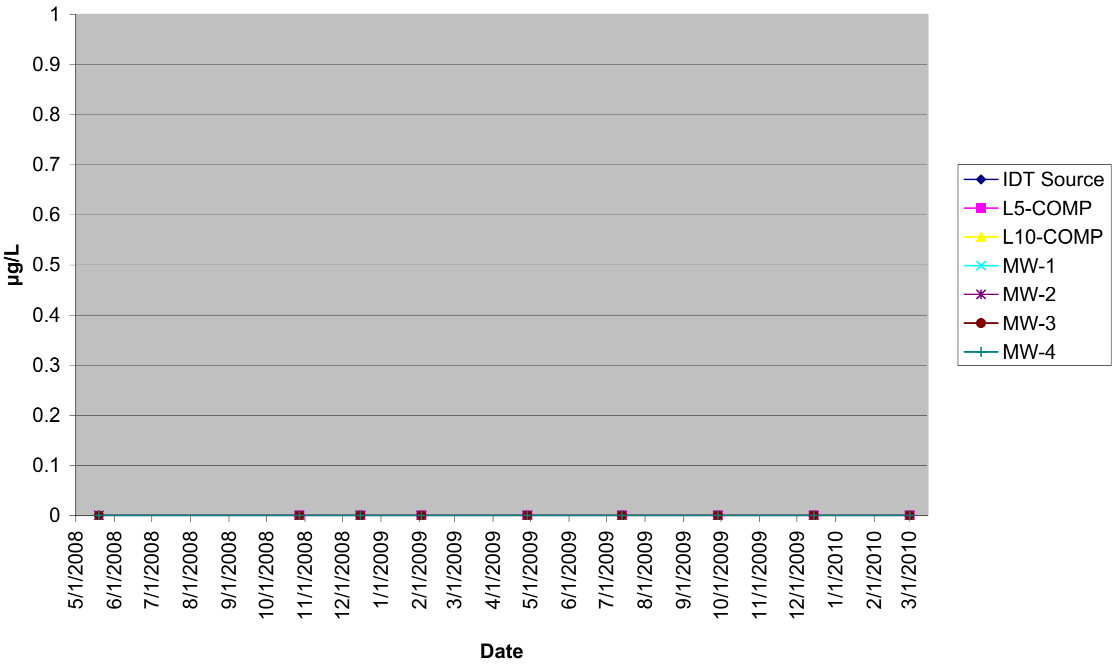


Figure III-4-28A Xylenes (m,p-xylenes)

Note: non-detects are treated in the figure as zero.

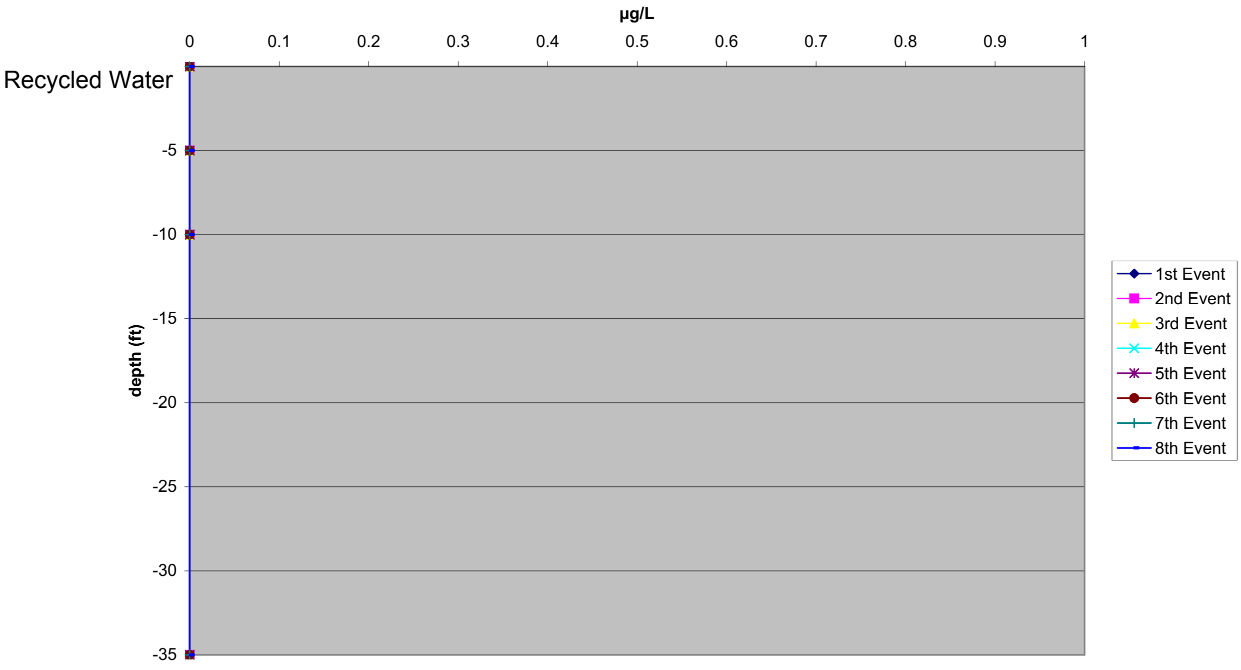
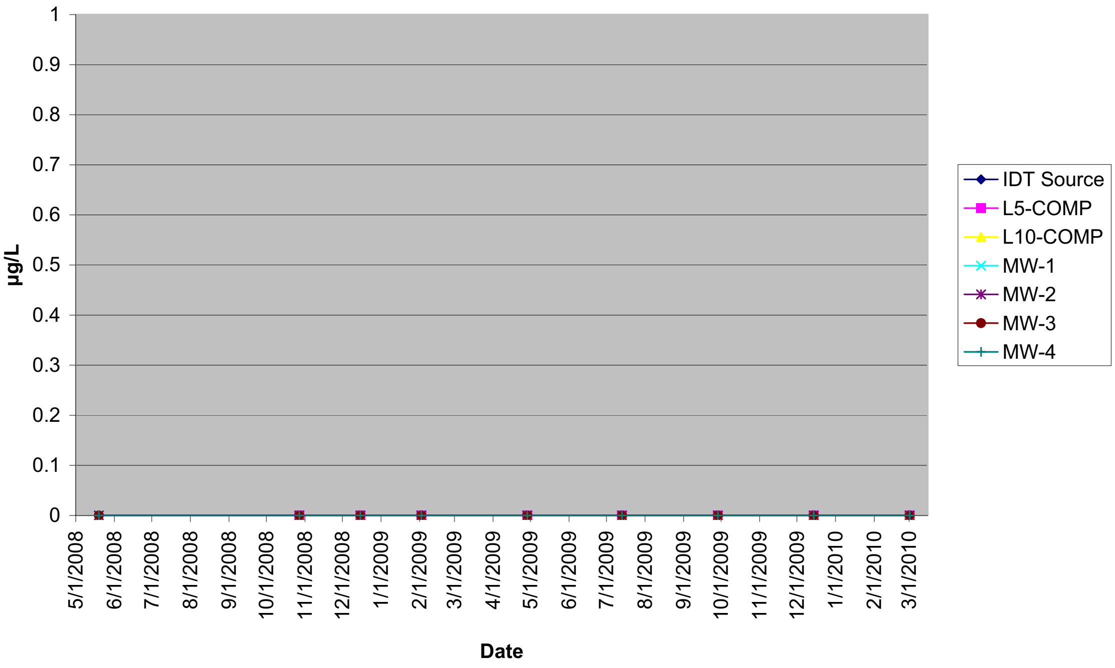


Figure III-4-28B Xylenes (m,p-xylenes)

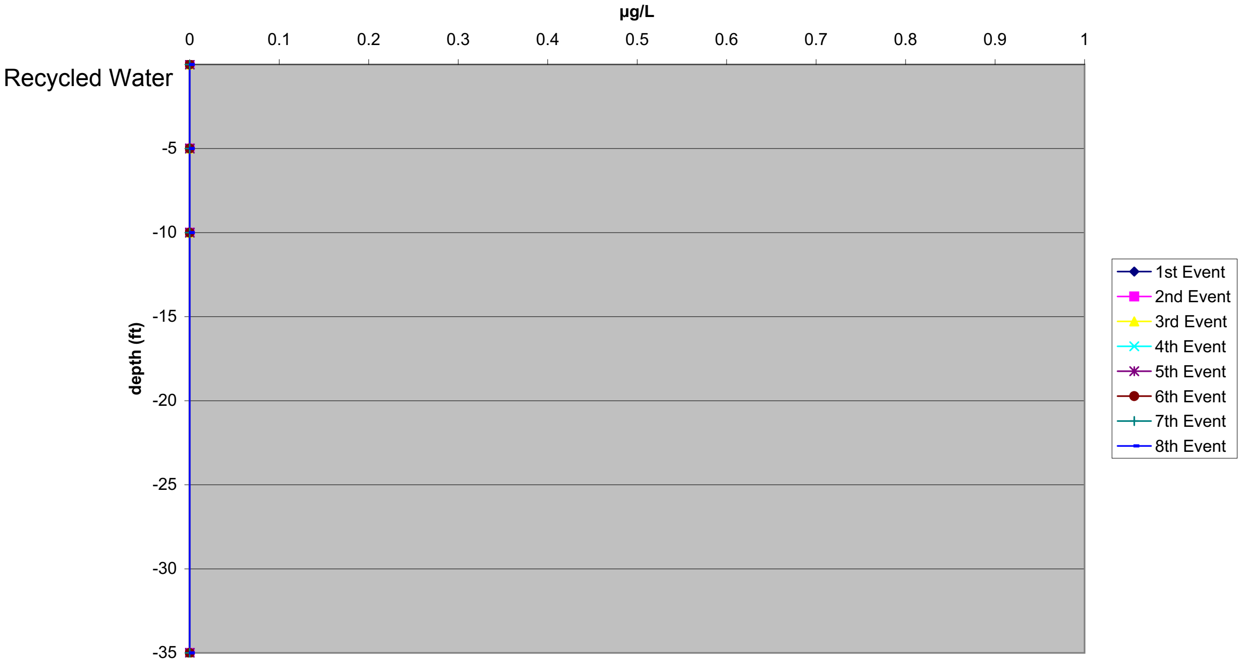
Note: non-detects are treated in the figure as zero.

Figure III-4-29A Xylenes (o-xylenes)



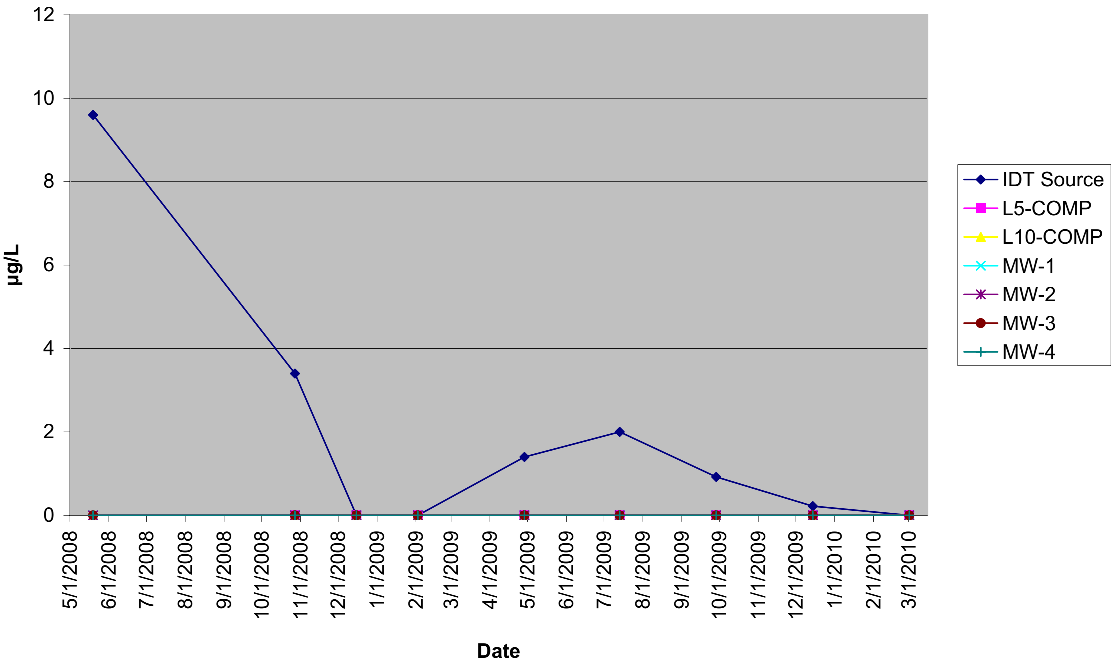
Note: non-detects are treated in the figure as zero.

Figure III-4-29B Xylenes (o-xylenes)



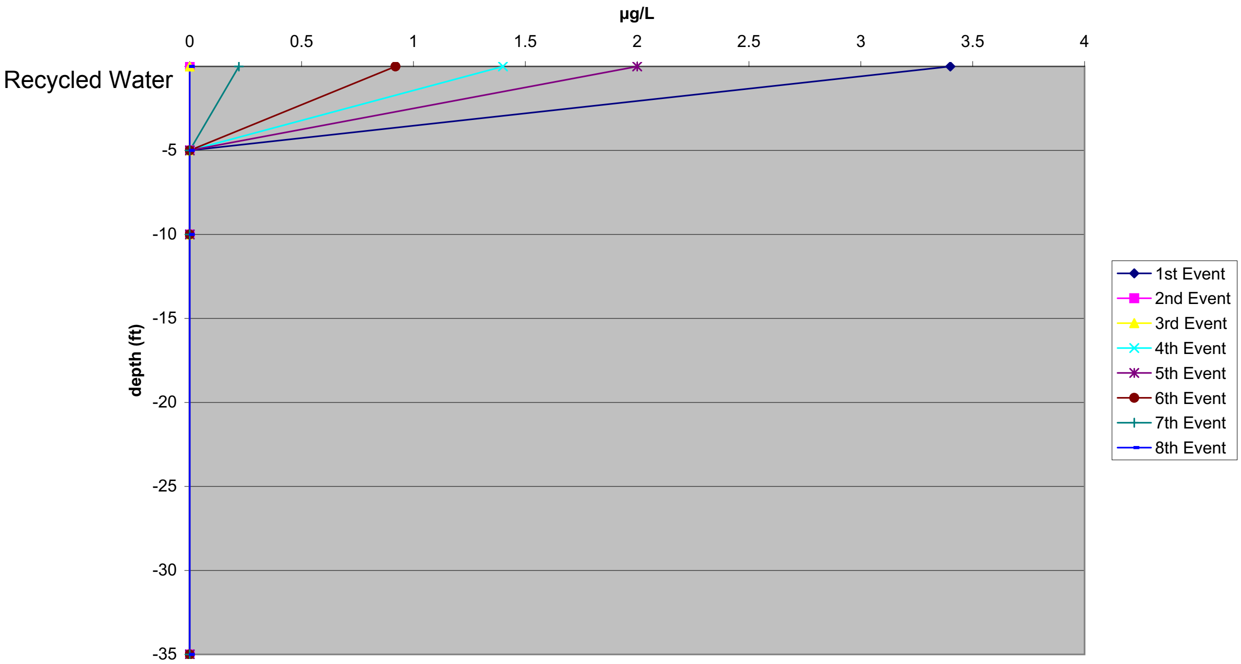
Note: non-detects are treated in the figure as zero.

Figure III-4-30A Bromochloroacetic Acid



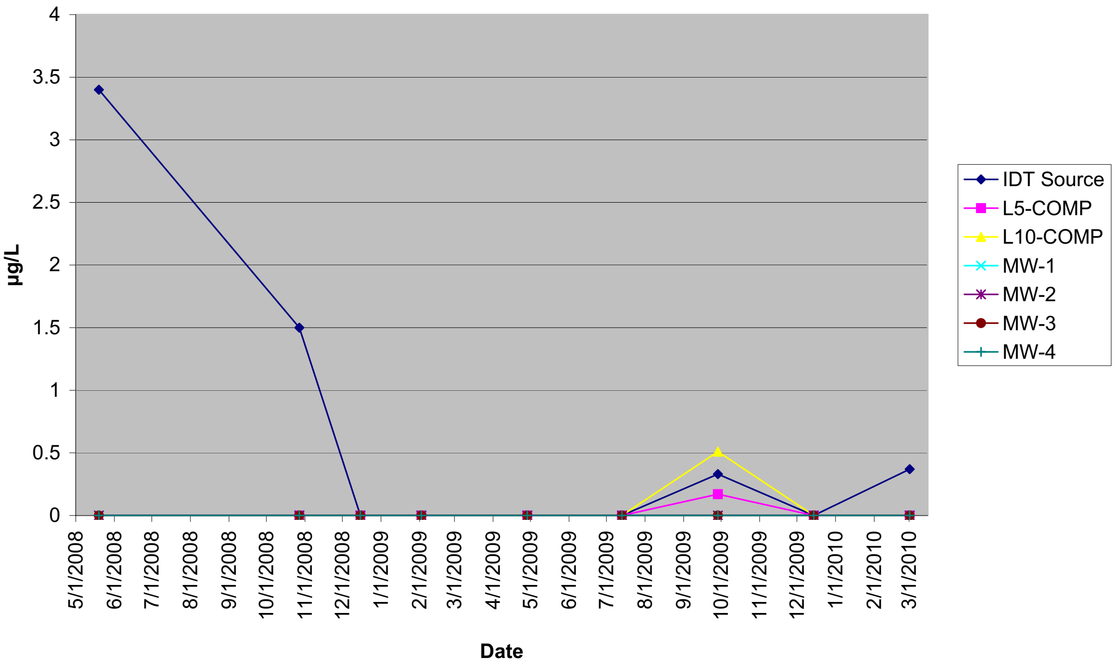
Note: non-detects are treated in the figure as zero.

Figure III-4-30B Bromochloroacetic Acid



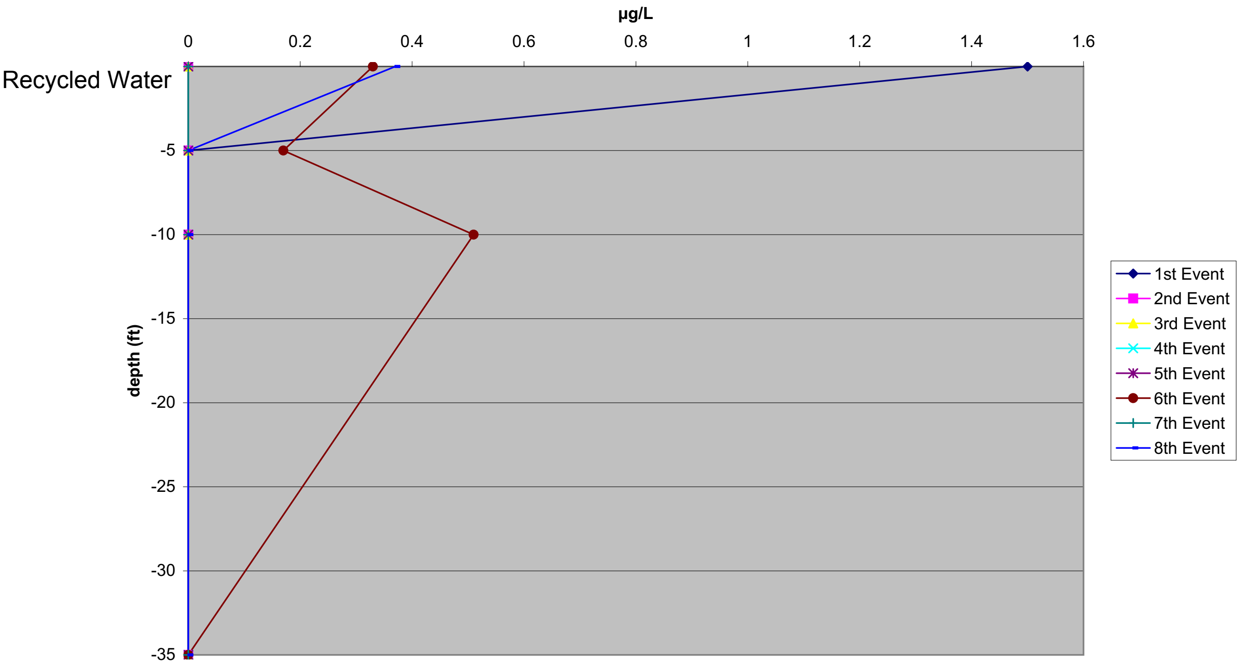
Note: non-detects are treated in the figure as zero.

Figure III-4-31A Dibromoacetic Acid



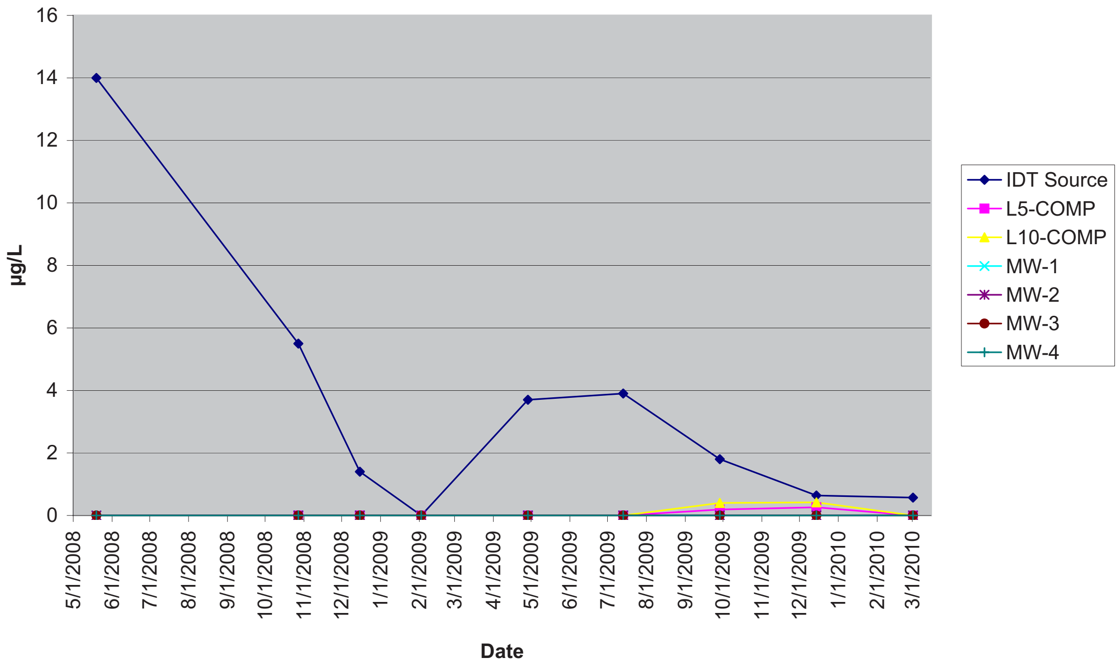
Note: non-detects are treated in the figure as zero.

Figure III-4-31B Dibromoacetic Acid



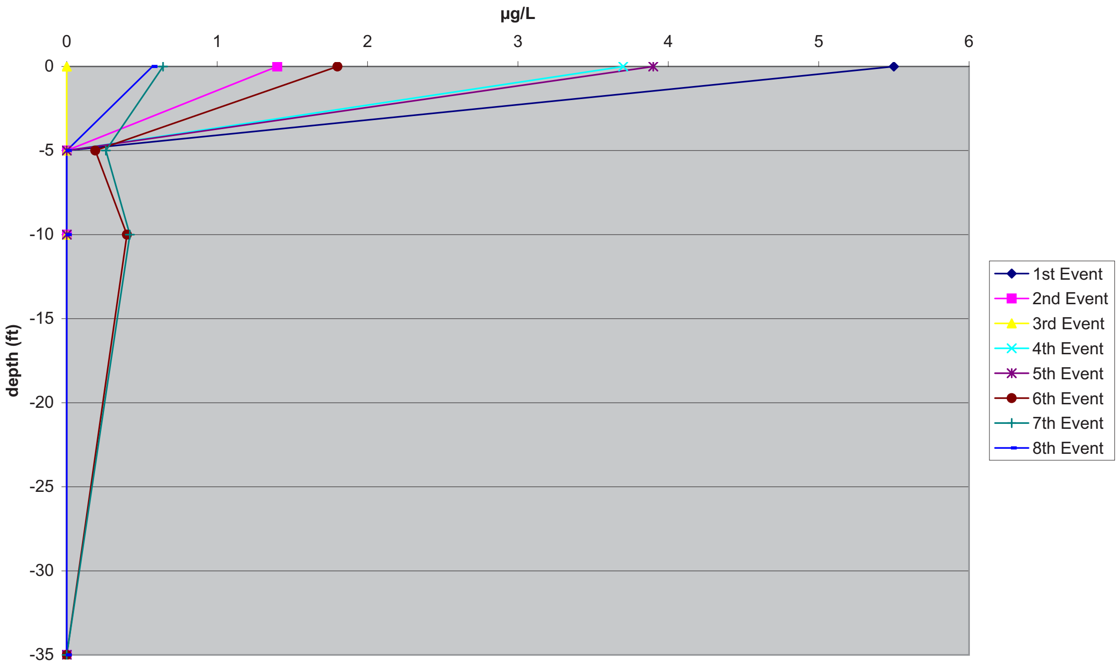
Note: non-detects are treated in the figure as zero.

Figure III-4-32A Dichloroacetic Acid



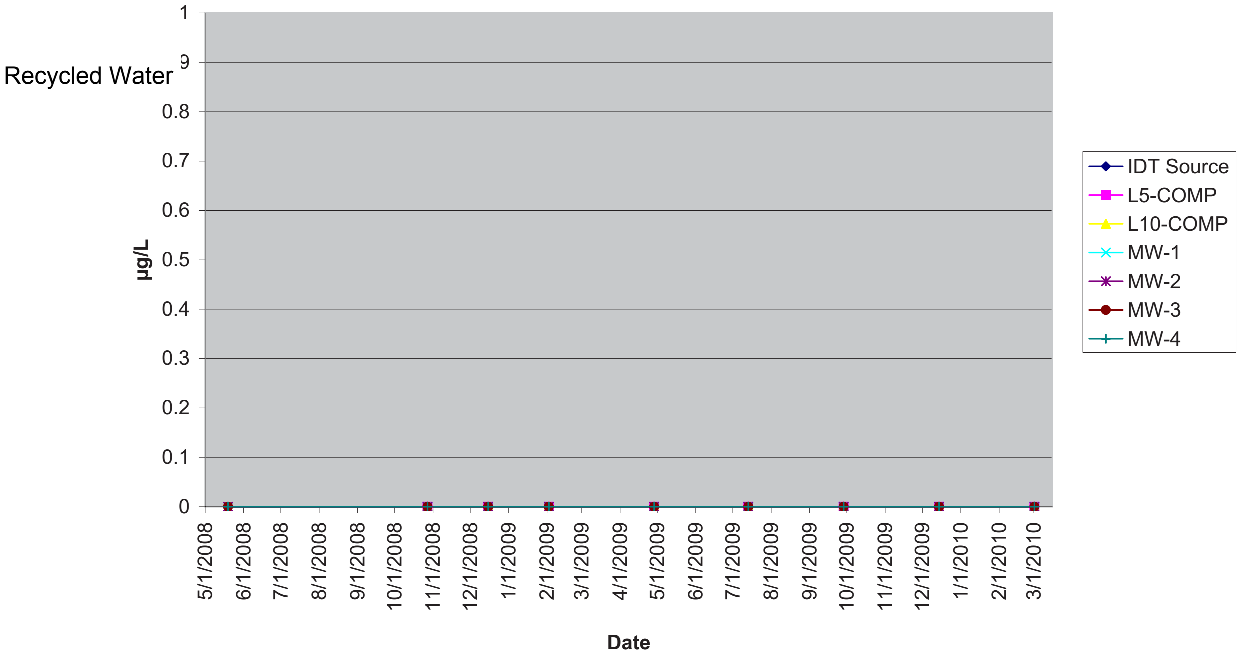
Note: non-detects are treated in the figure as zero.

Figure III-4-32B Dichloroacetic Acid



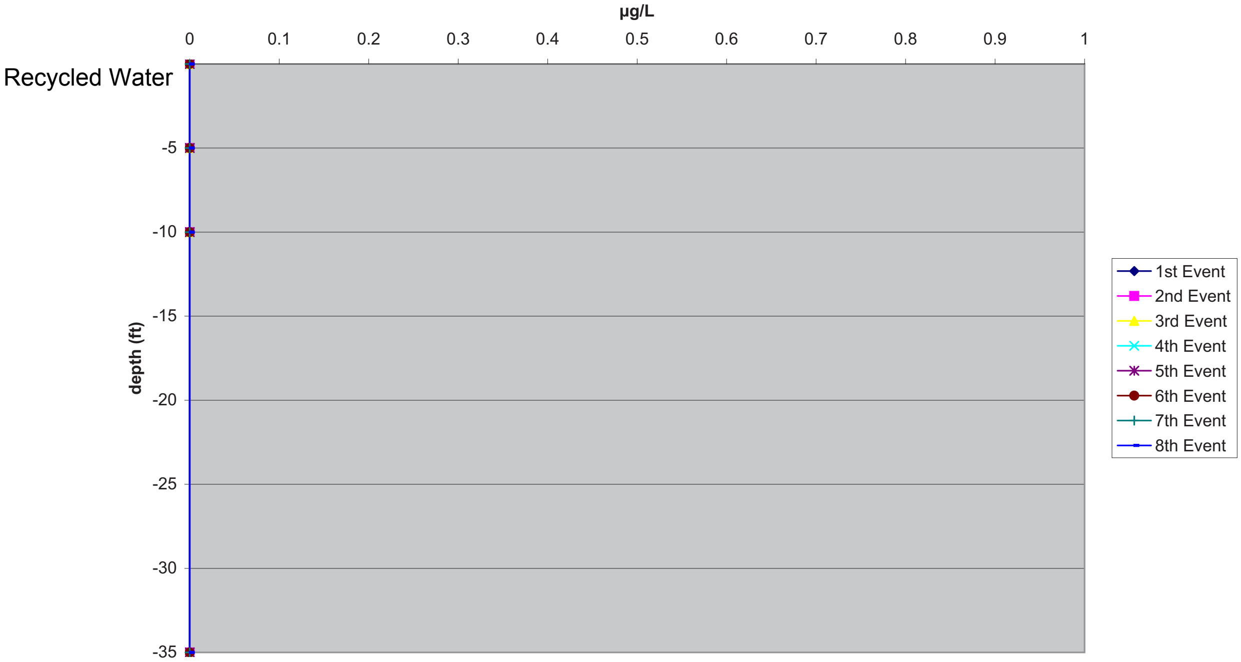
Note: non-detects are treated in the figure as zero.

Figure III-4-33A Monobromoacetic Acid



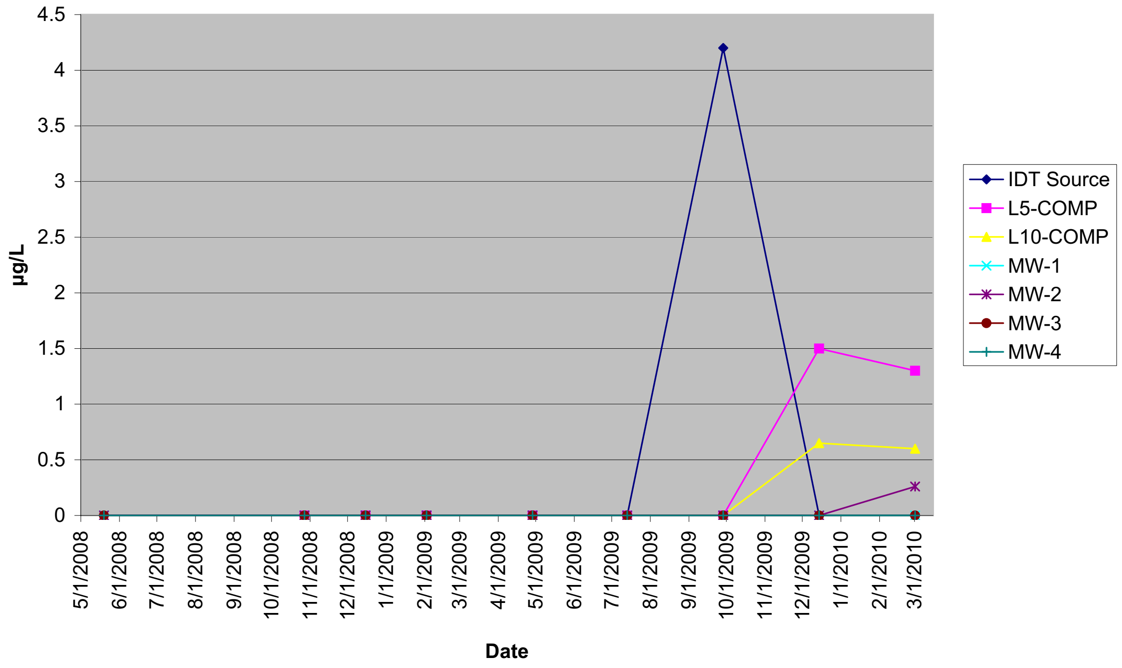
Note: non-detects are treated in the figure as zero.

Figure III-4-33B Monobromoacetic Acid



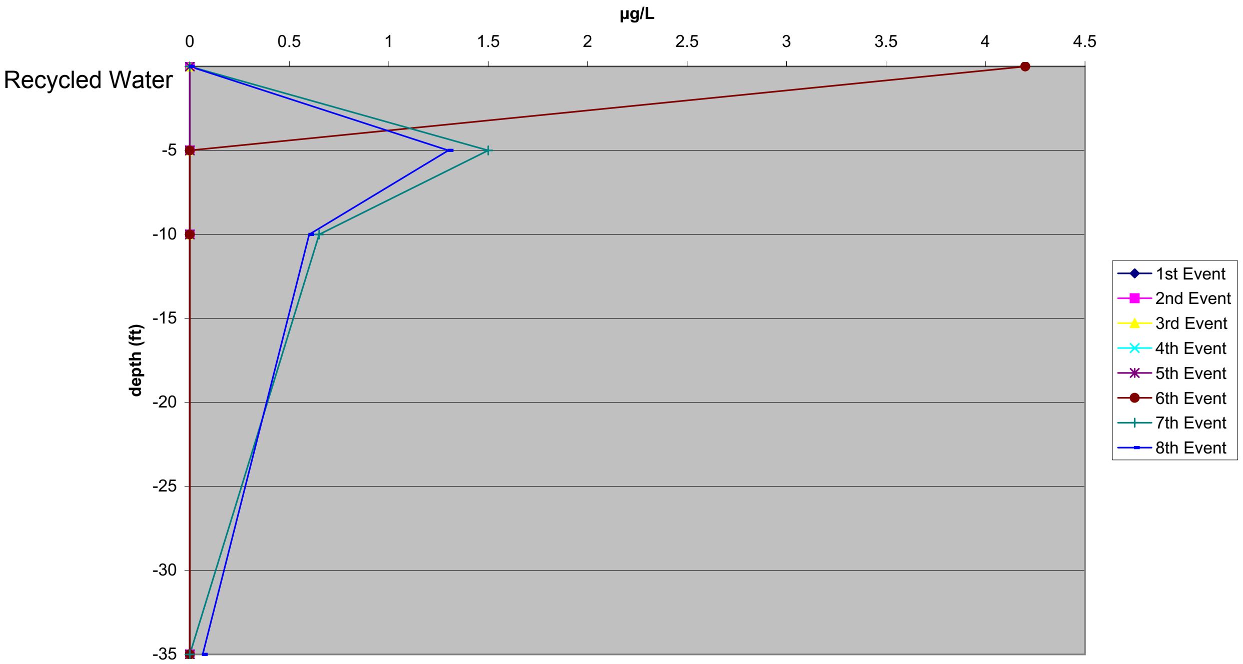
Note: non-detects are treated in the figure as zero.

Figure III-4-34A Monochloroacetic Acid



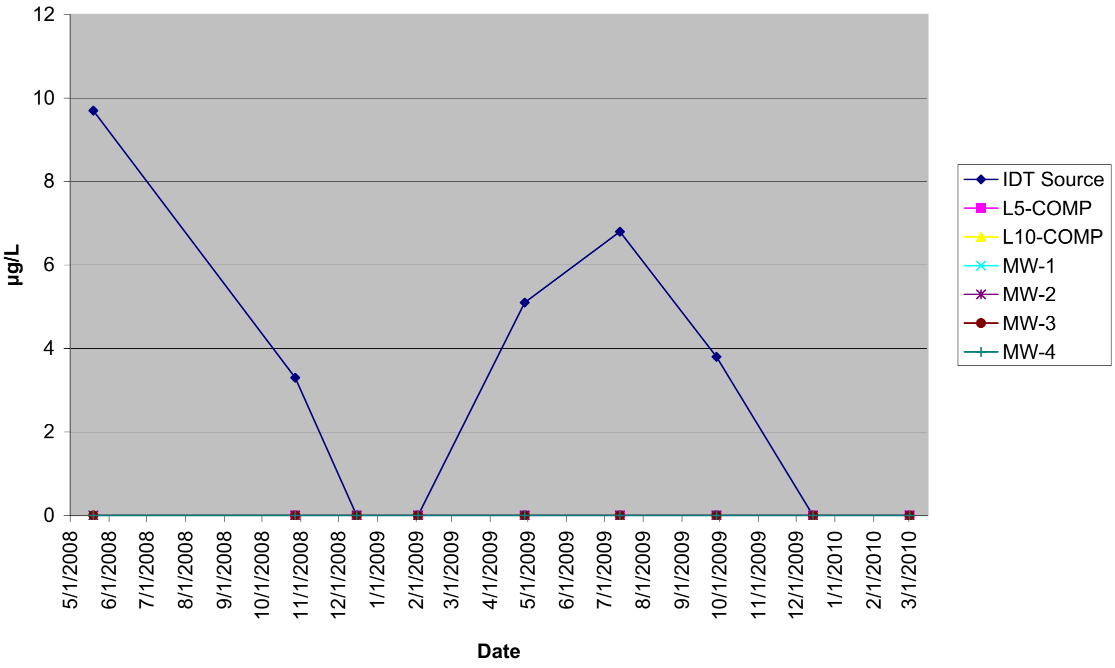
Note: non-detects are treated in the figure as zero.

Figure III-4-34B Monochloroacetic Acid



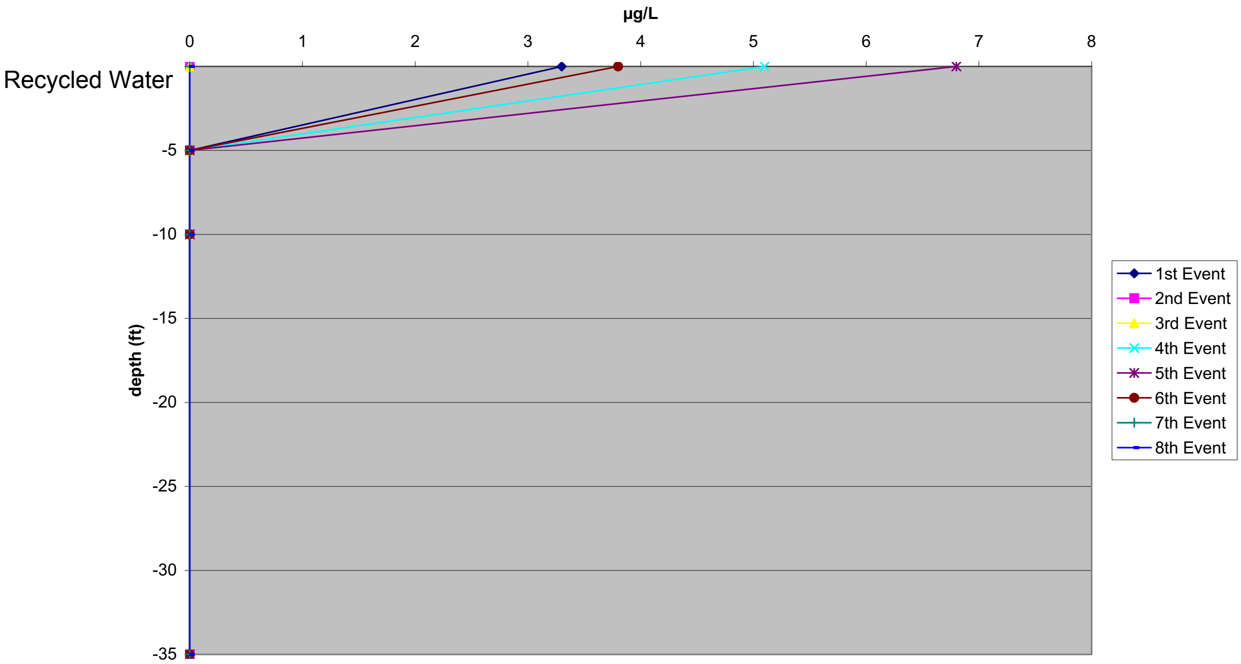
Note: non-detects are treated in the figure as zero.

Figure III-4-35A Trichloroacetic Acid



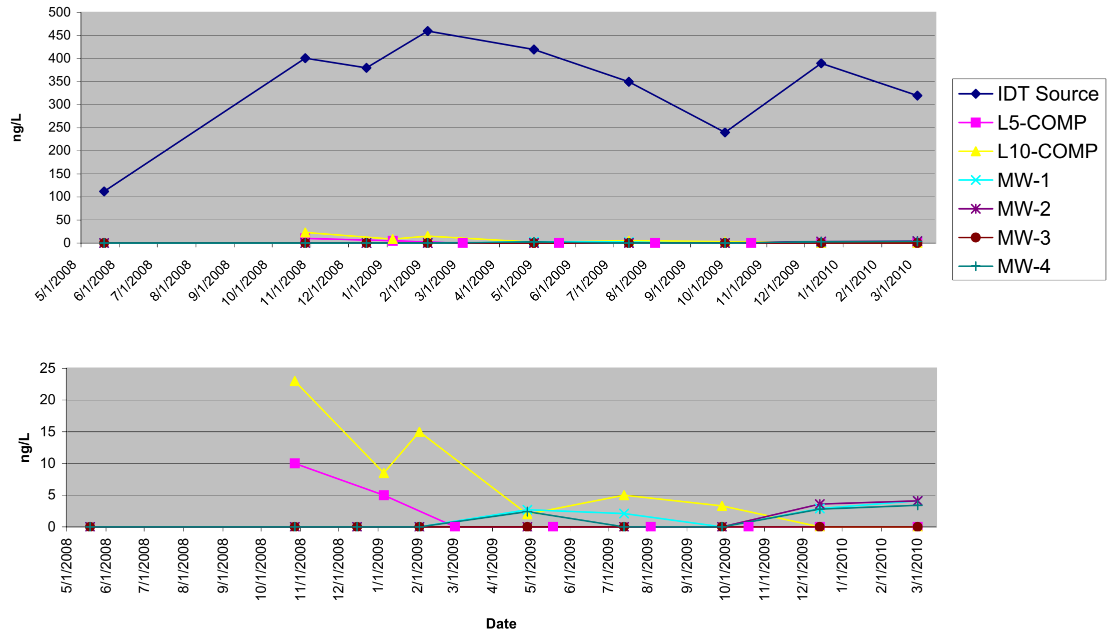
Note: non-detects are treated in the figure as zero.

Figure III-4-35B Trichloroacetic Acid



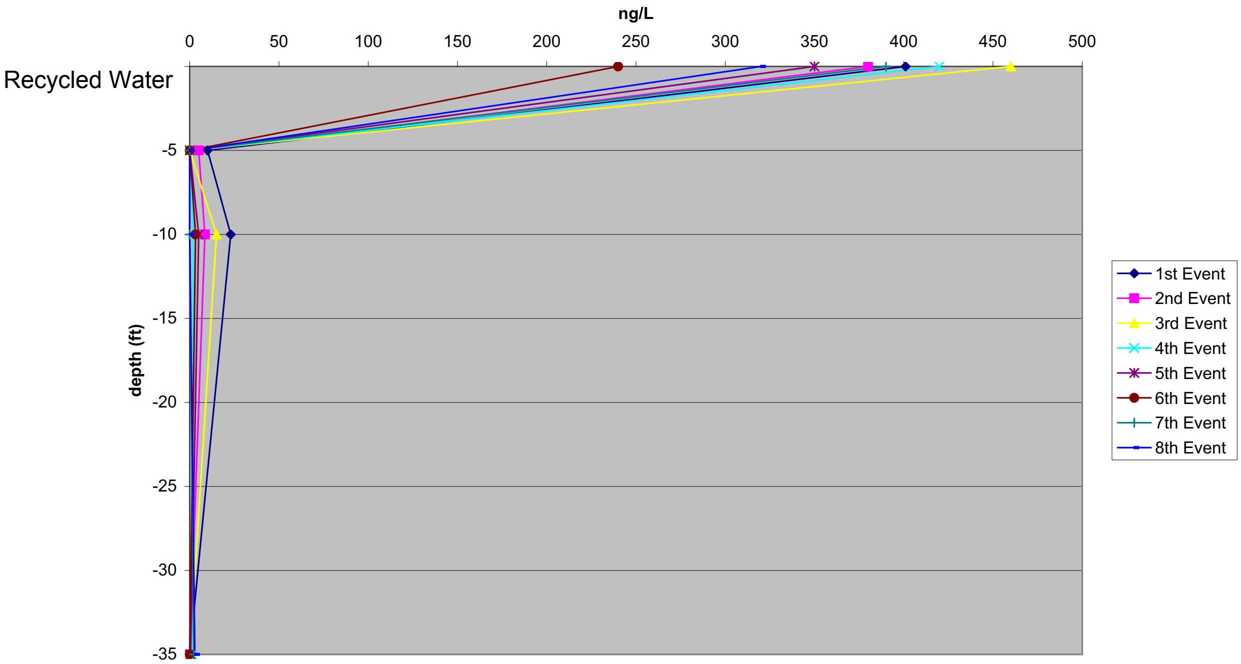
Note: non-detects are treated in the figure as zero.

Figure III-4-36A N-Nitroso Dimethylamine (NDMA)



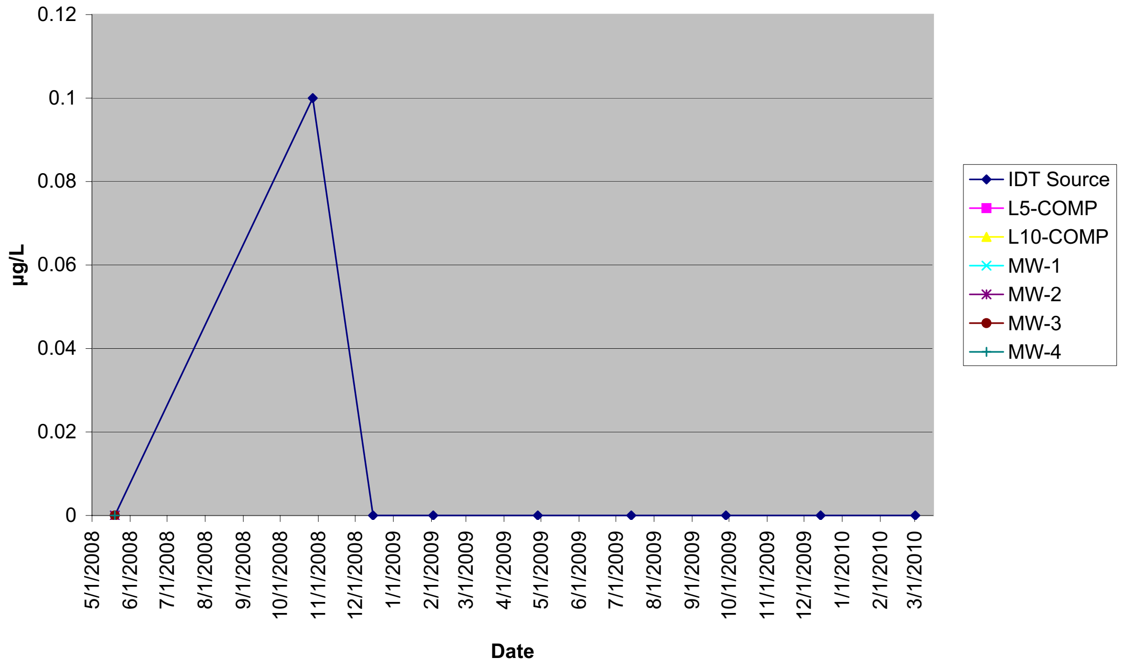
Note: non-detects are treated in the figure as zero.

Figure III-4-36B N-Nitroso Dimethylamine (NDMA)



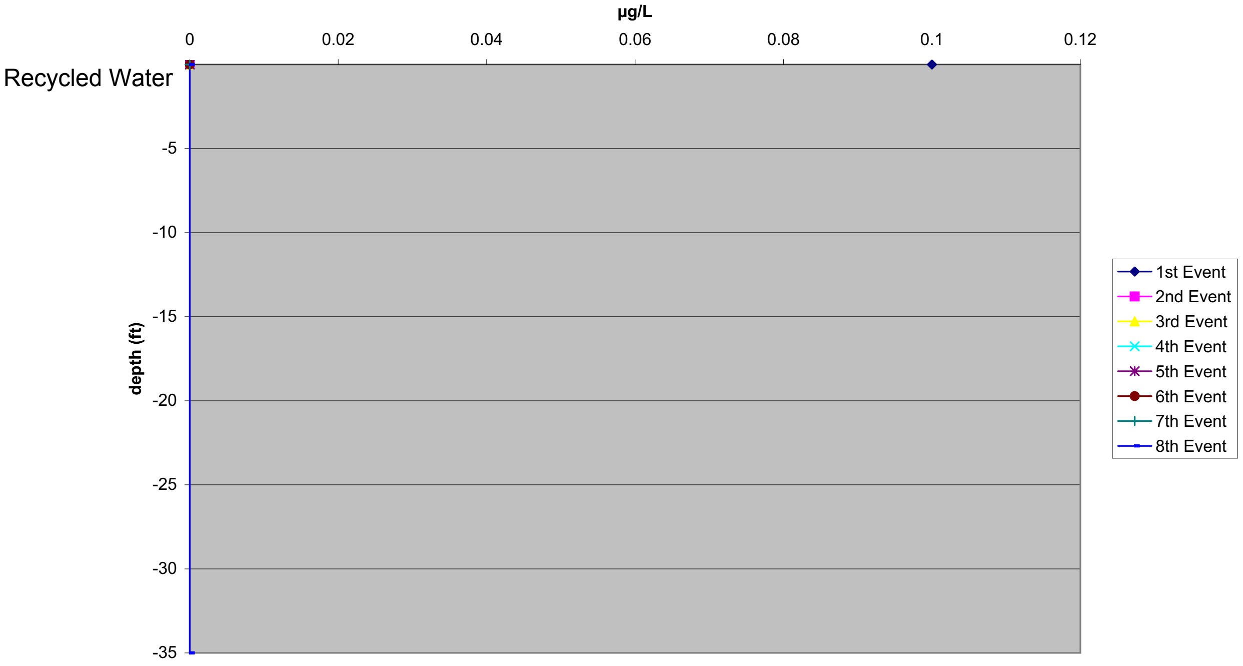
Note: non-detects are treated in the figure as zero.

Figure III-4-37A Terbuthylazine



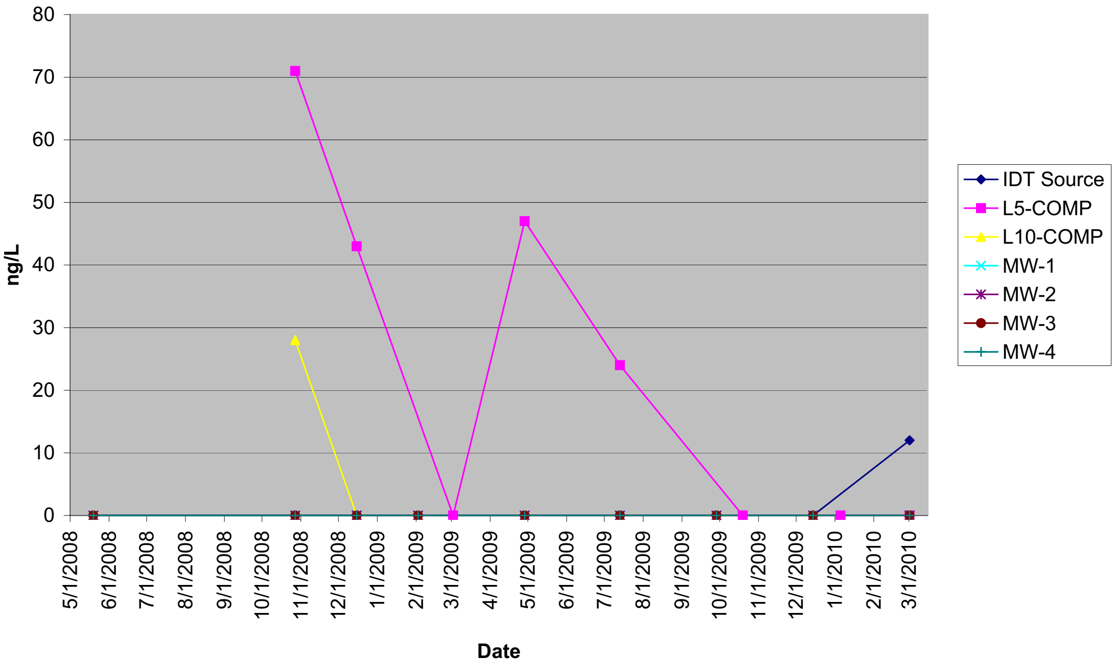
Note: non-detects are treated in the figure as zero.

Figure III-4-37B Terbuthylazine



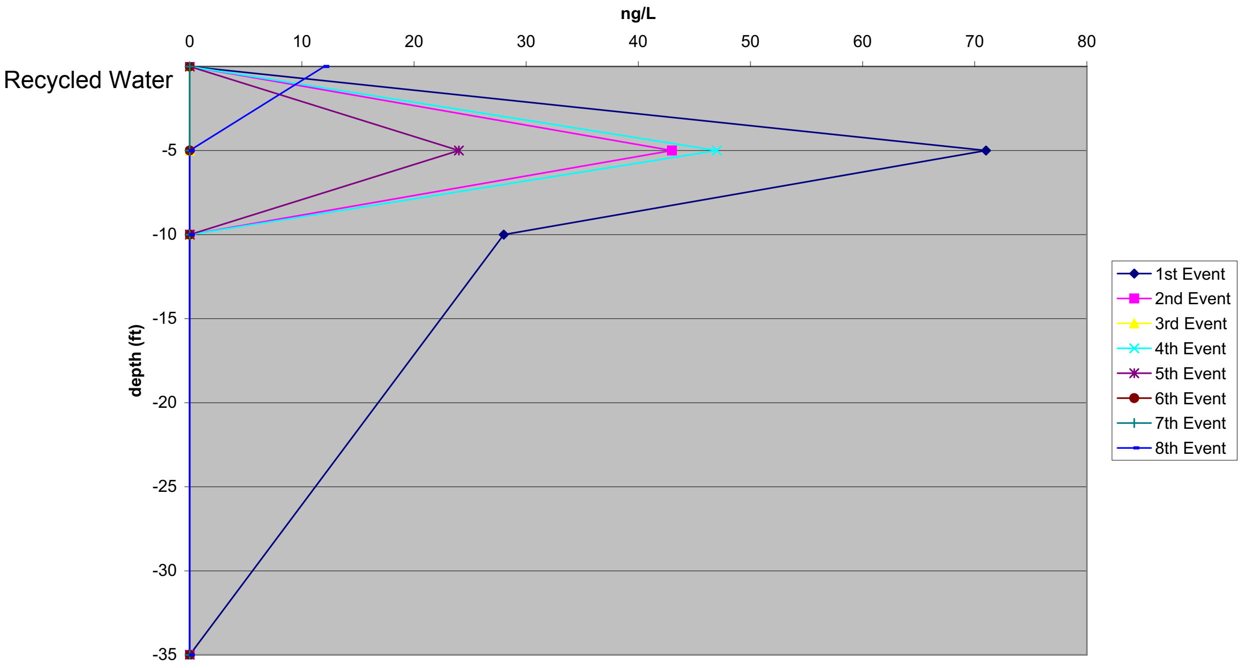
Note: non-detects are treated in the figure as zero.

Figure III-4-38A Perfluorochemicals (PFBA)



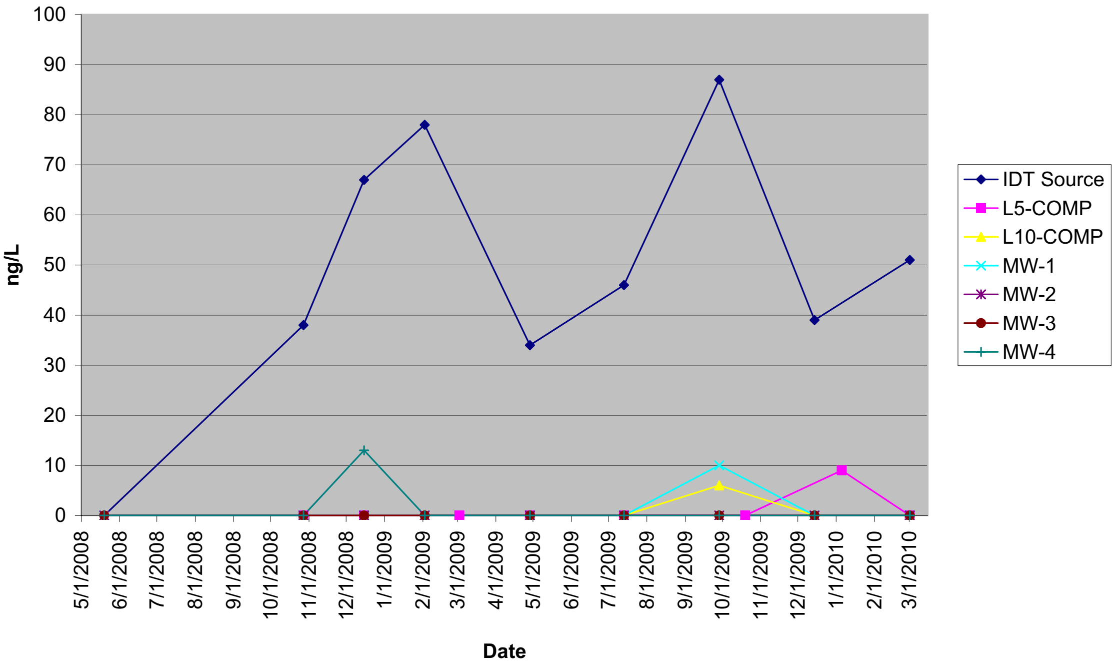
Note: non-detects are treated in the figure as zero.

Figure III-4-38B Perfluorochemicals (PFBA)



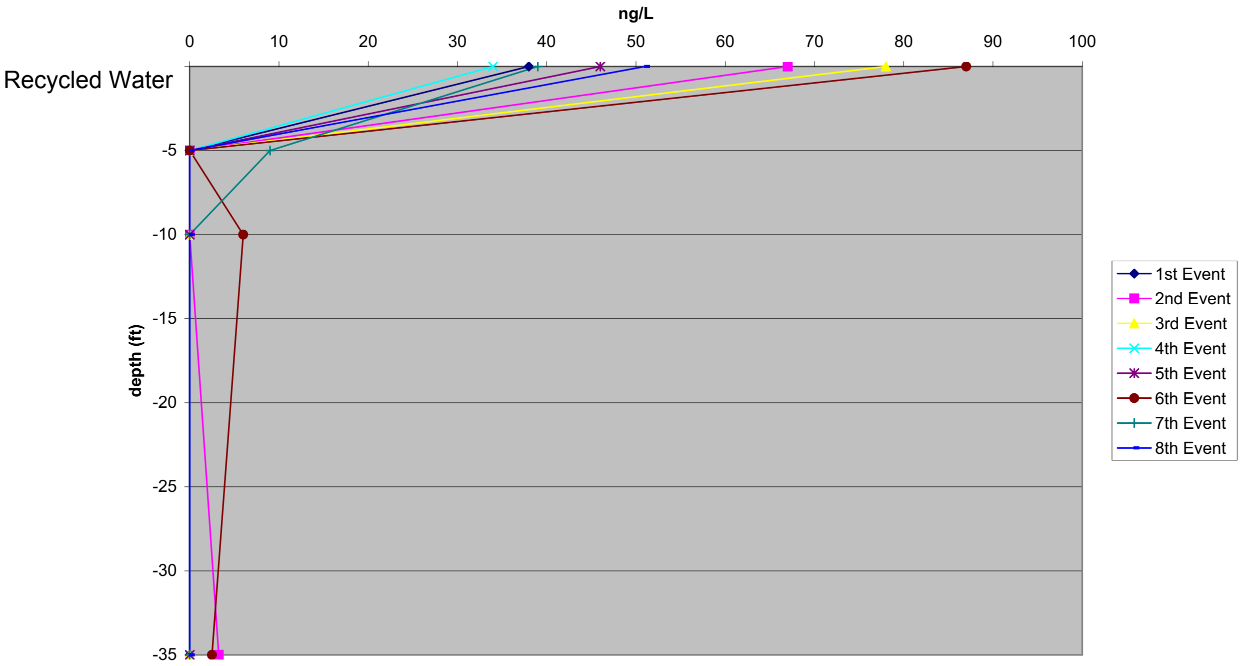
Note: non-detects are treated in the figure as zero.

Figure III-4-39A Perfluorochemicals (PFOS)



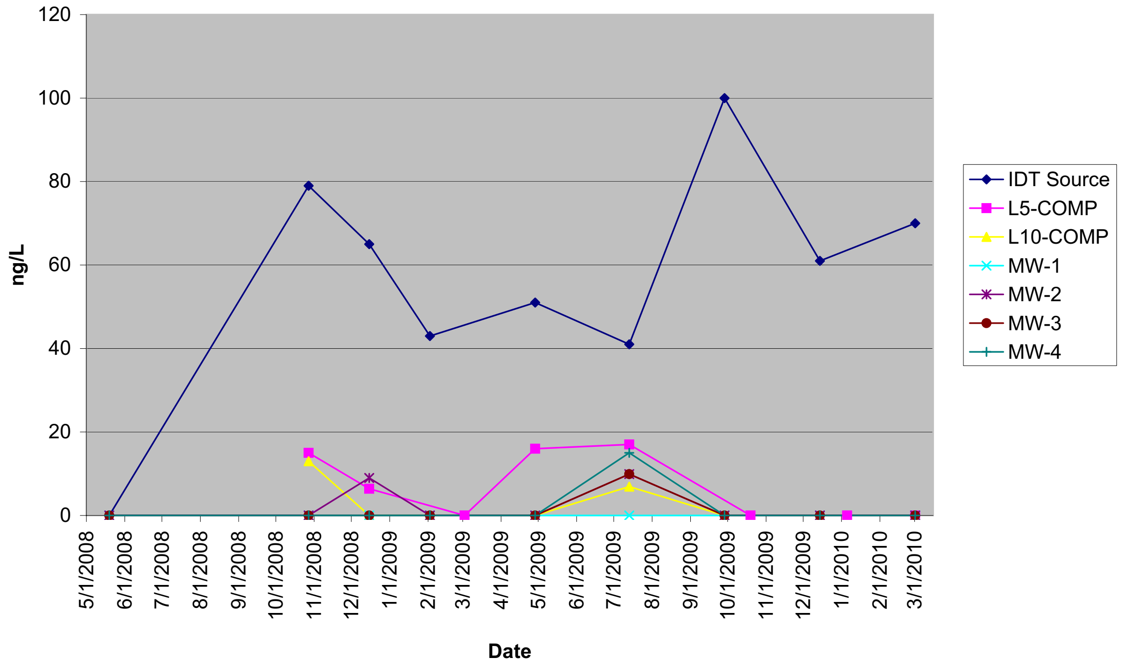
Note: non-detects are treated in the figure as zero.

Figure III-4-39B Perfluorochemicals (PFOS)



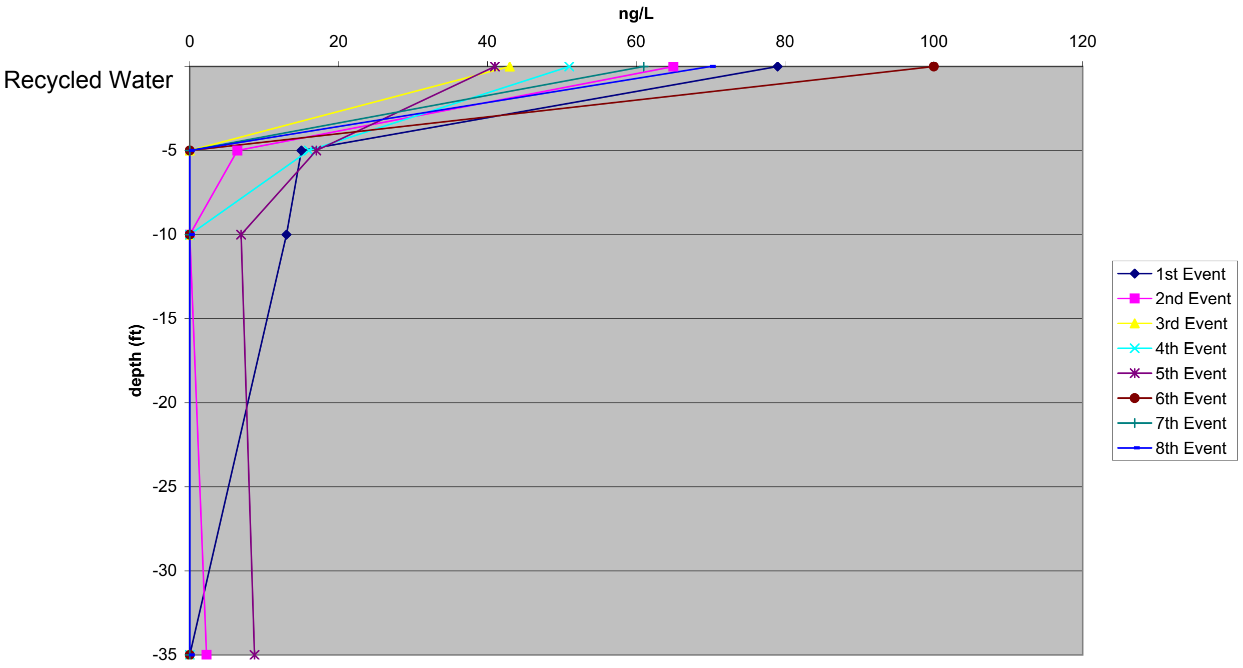
Note: non-detects are treated in the figure as zero.

Figure III-4-40A Perfluorochemicals (PFOA)



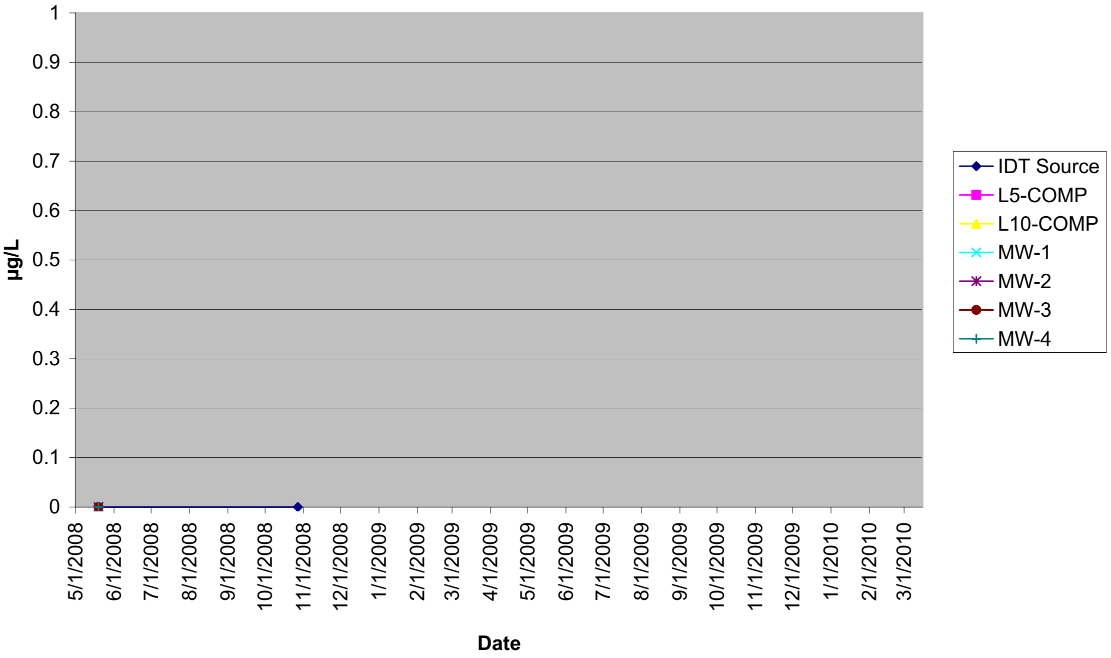
Note: non-detects are treated in the figure as zero.

Figure III-4-40B Perfluorochemicals (PFOA)



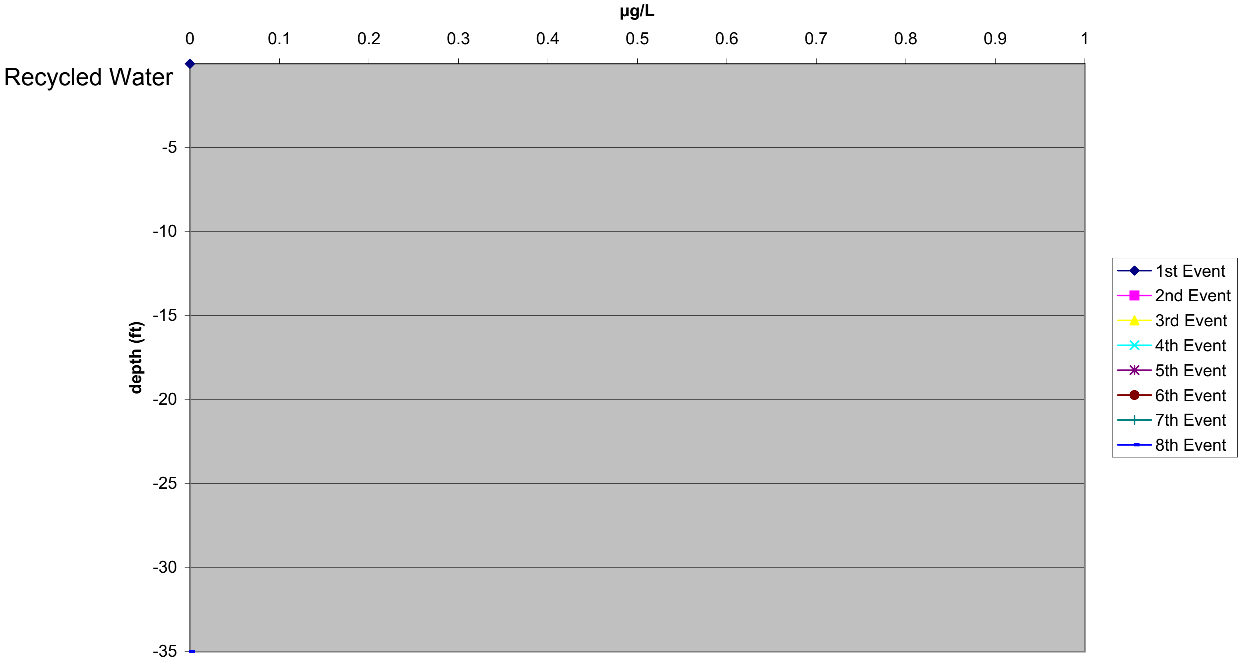
Note: non-detects are treated in the figure as zero.

Figure III-4-41A Nitrilotriacetic Acid (NTA)



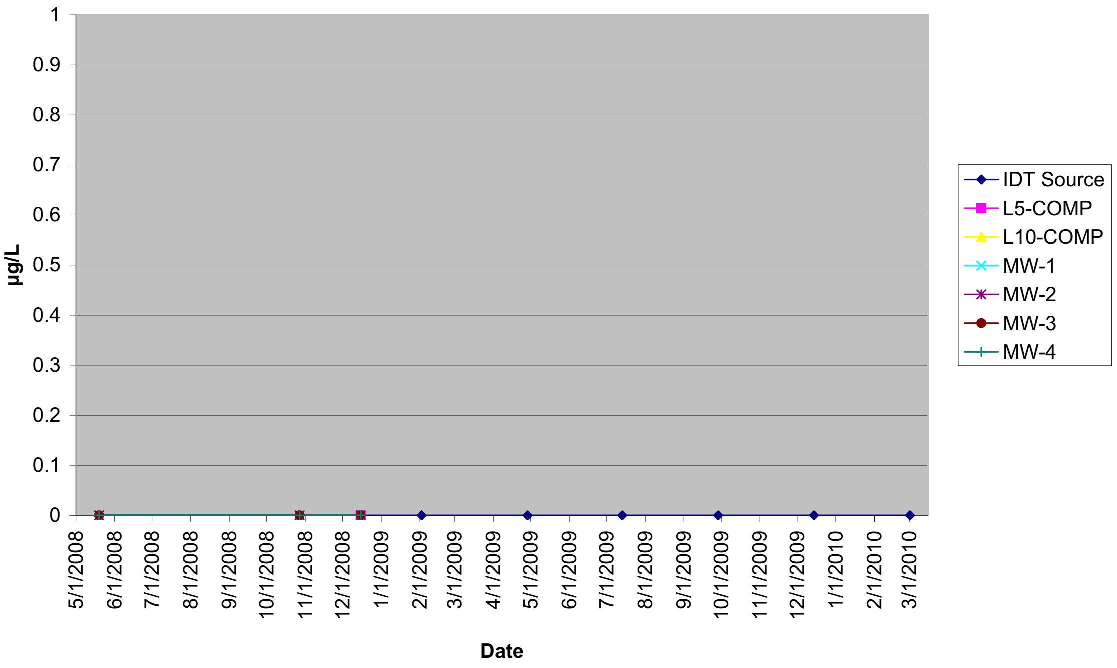
Note: non-detects are treated in the figure as zero.

Figure III-4-41B Nitrilotriacetic Acid (NTA)



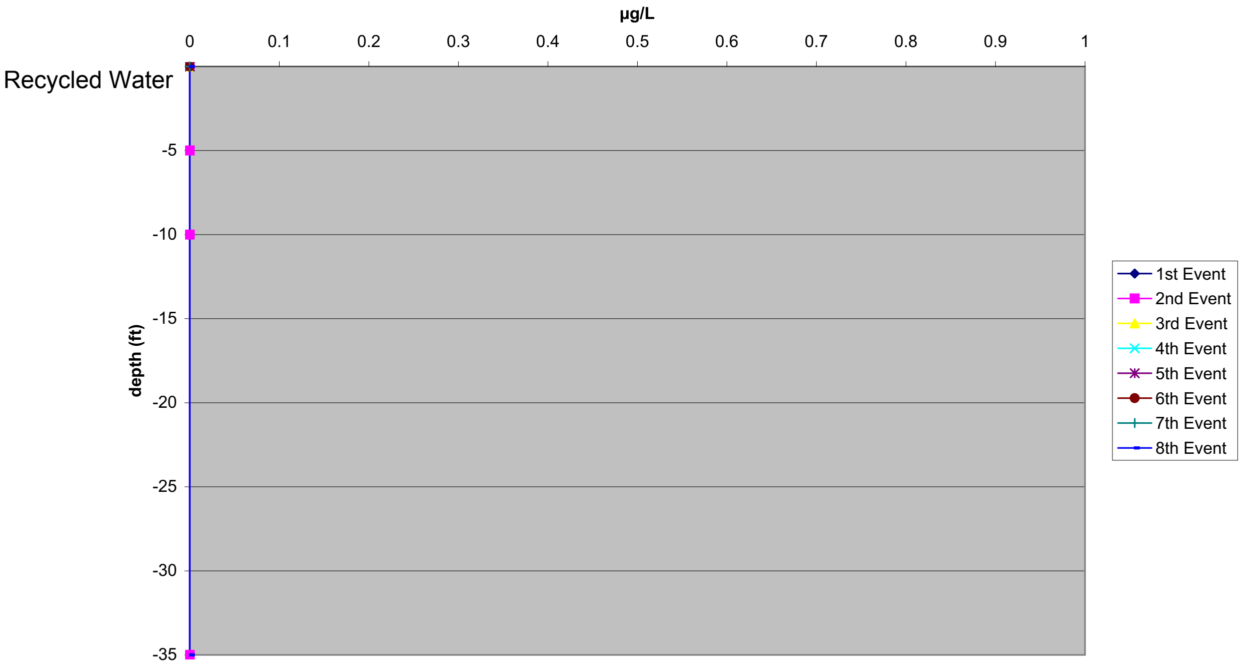
Note: non-detects are treated in the figure as zero.

Figure III-4-42A Ethylenediaminetetraacetic Acid (EDTA)



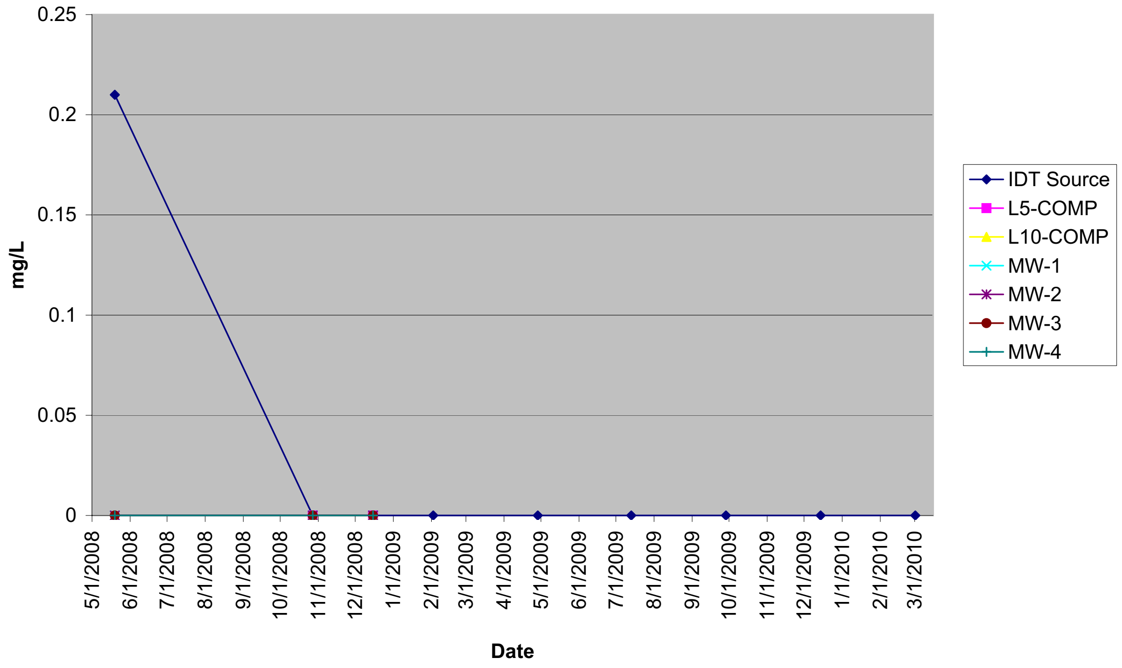
Note: non-detects are treated in the figure as zero.

Figure III-4-42B Ethylenediaminetetraacetic Acid (EDTA)



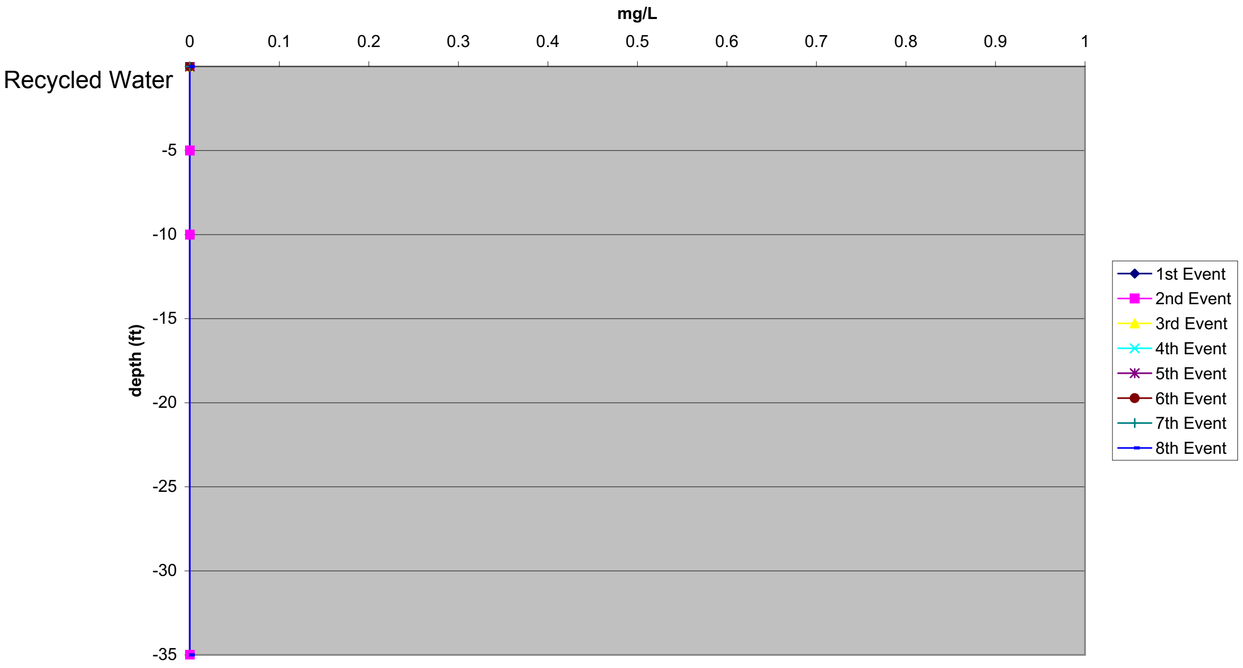
Note: non-detects are treated in the figure as zero.

Figure III-4-43A Surfactants (MBAS)



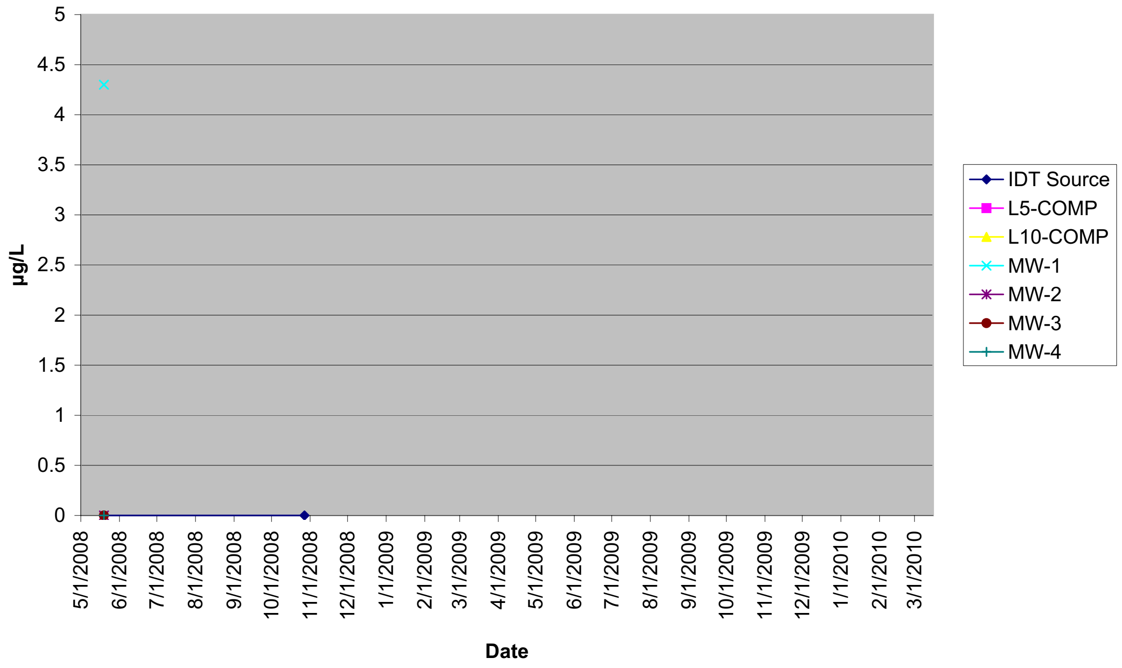
Note: non-detects are treated in the figure as zero.

Figure III-4-43B Surfactants (MBAS)



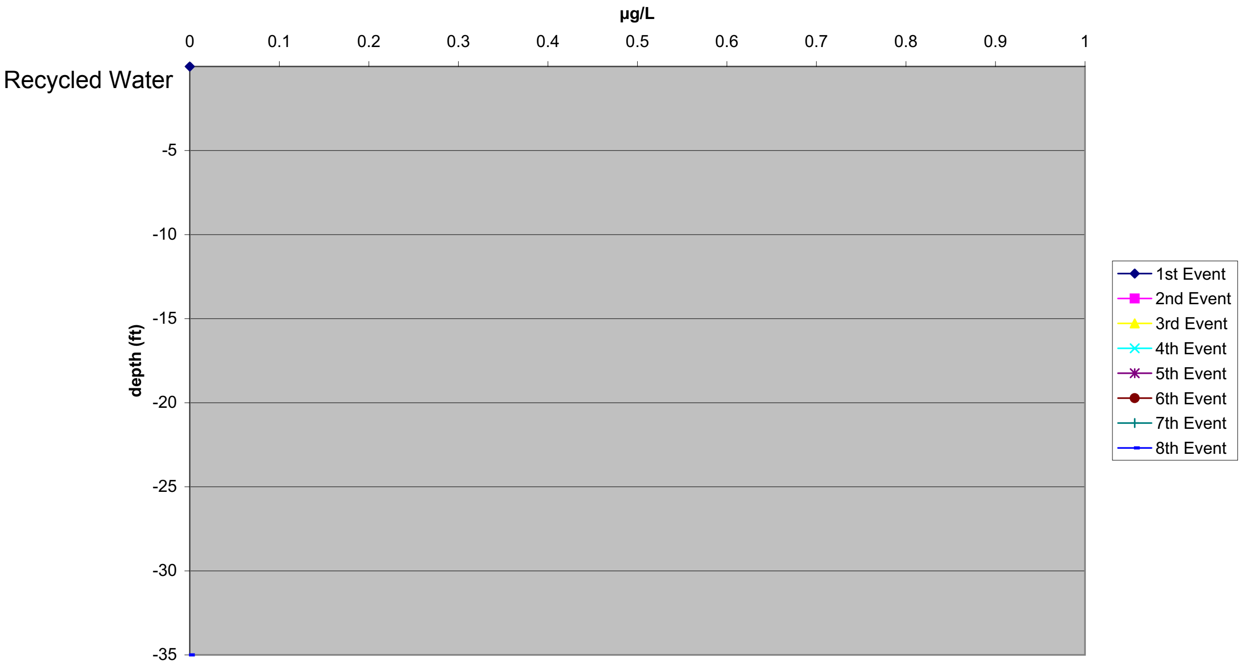
Note: non-detects are treated in the figure as zero.

Figure III-4-44A Perchlorate



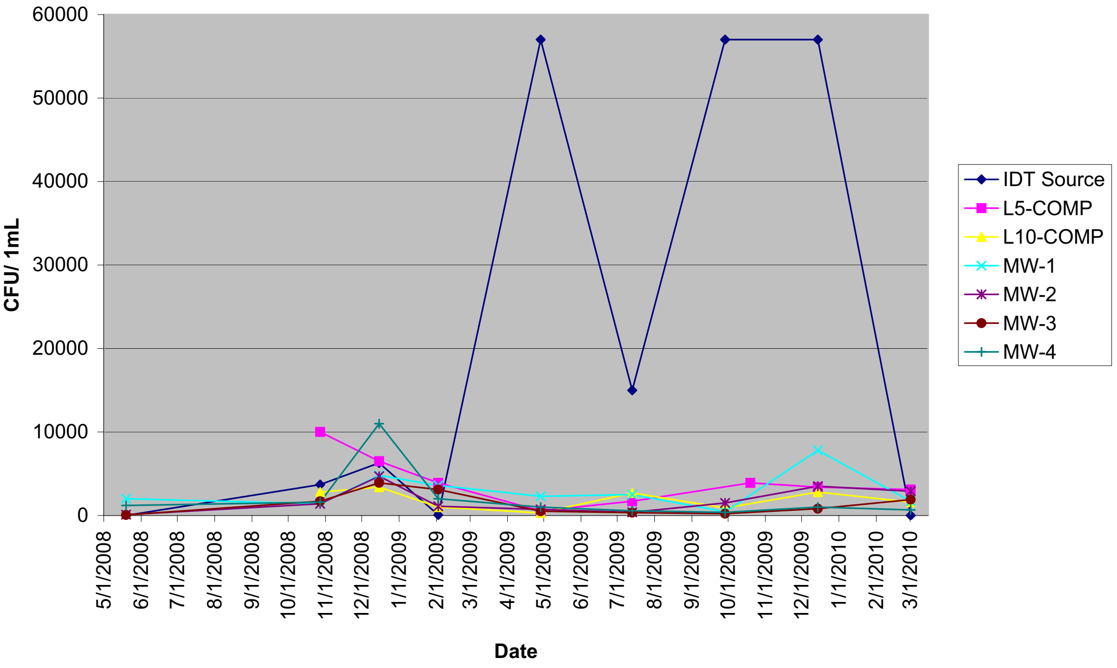
Note: non-detects are treated in the figure as zero.

Figure III-4-44B Perchlorate



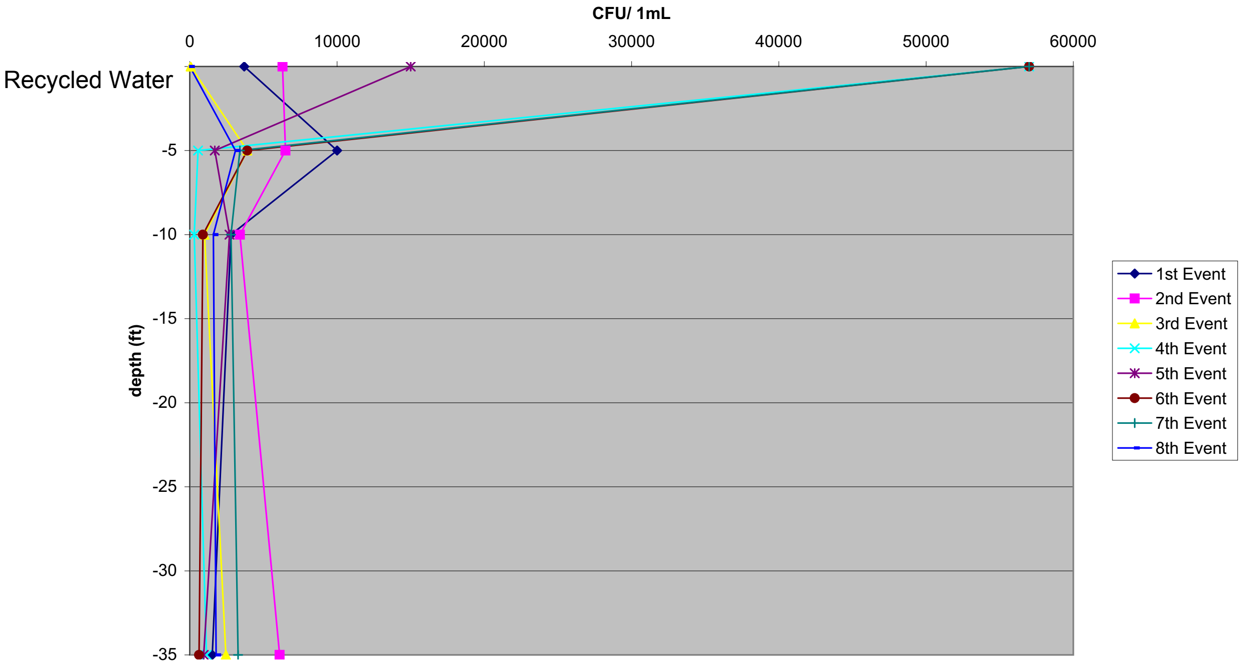
Note: non-detects are treated in the figure as zero.

Figure III-4-45A Heterotrophic Plate Count



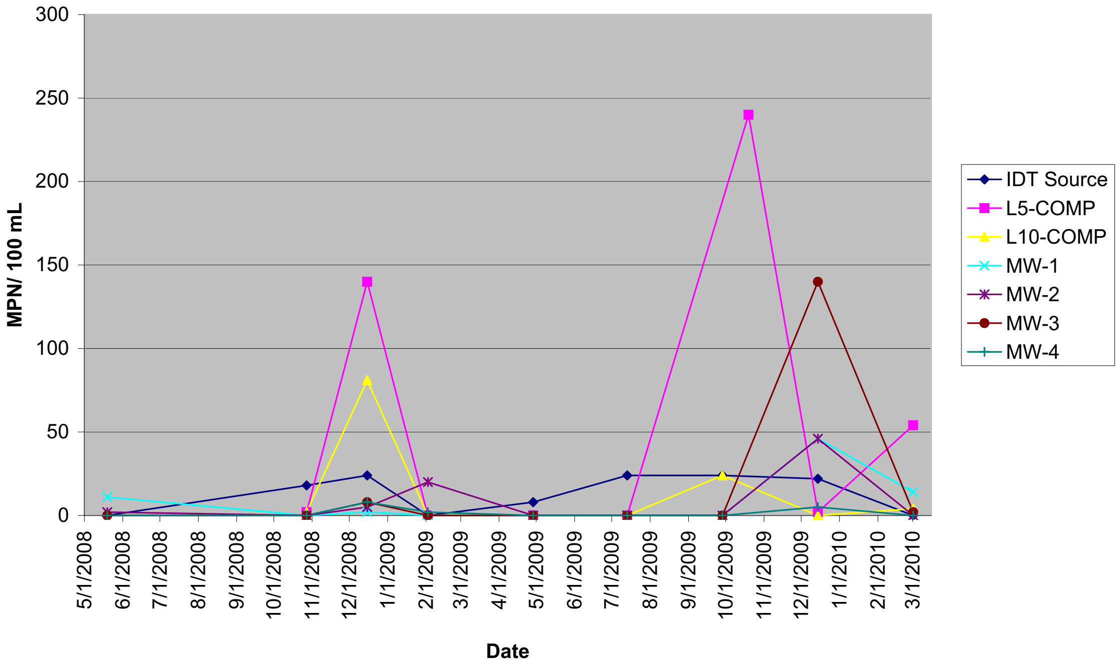
Note: non-detects are treated in the figure as zero.

Figure III-4-45B Heterotrophic Plate Count



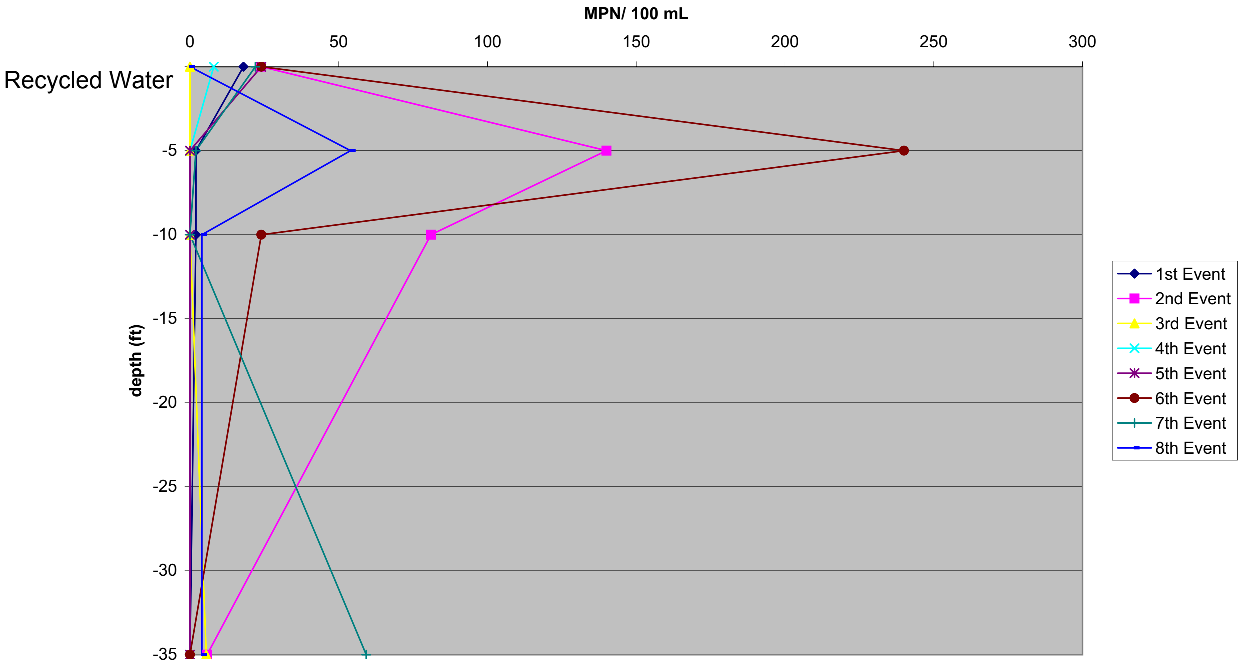
Note: non-detects are treated in the figure as zero.

Figure III-4-46A Coliforms, Total



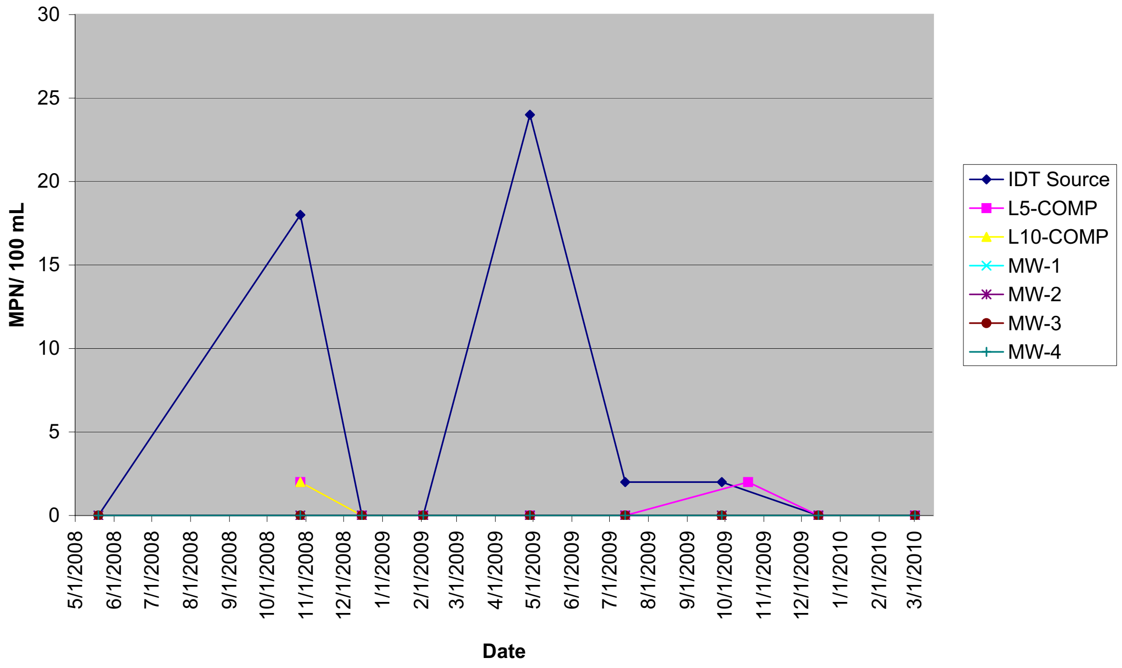
Note: non-detects are treated in the figure as zero.

Figure III-4-46B Coliforms, Total



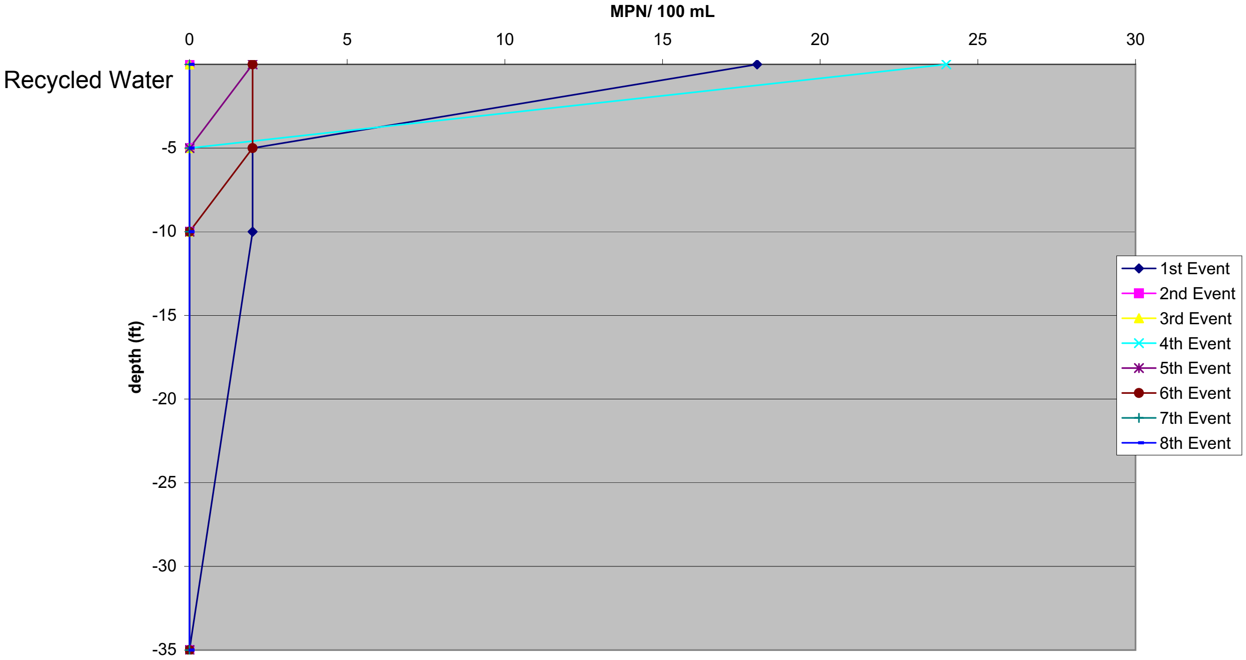
Note: non-detects are treated in the figure as zero.

Figure III-4-47A Fecal Coliforms



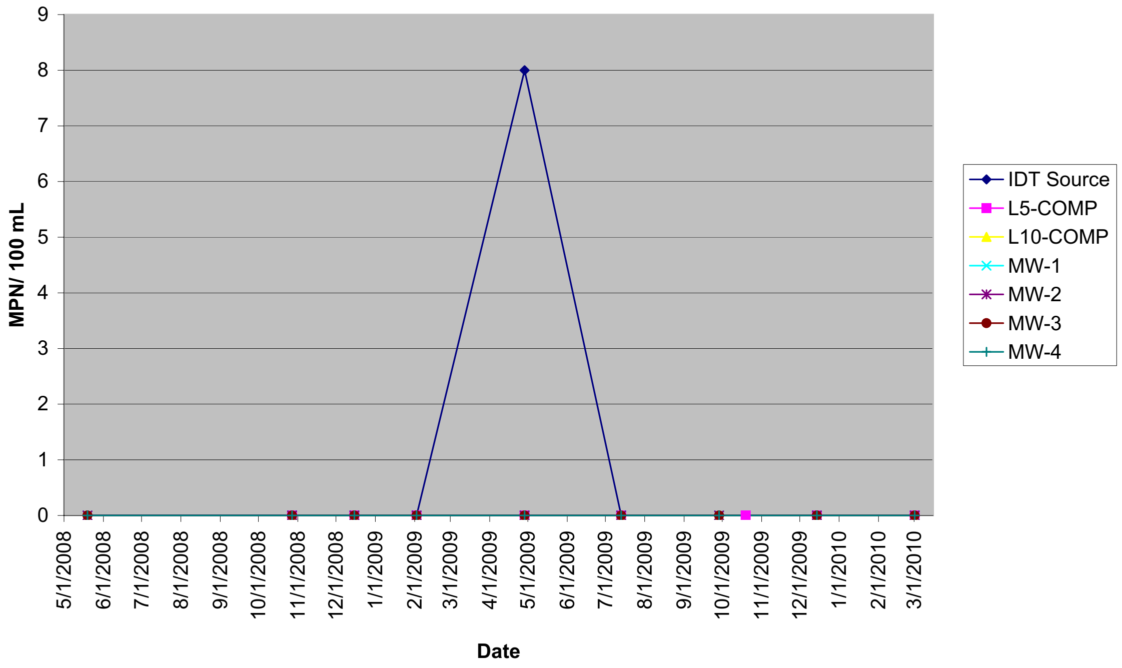
Note: non-detects are treated in the figure as zero.

Figure III-4-47B Fecal Coliforms



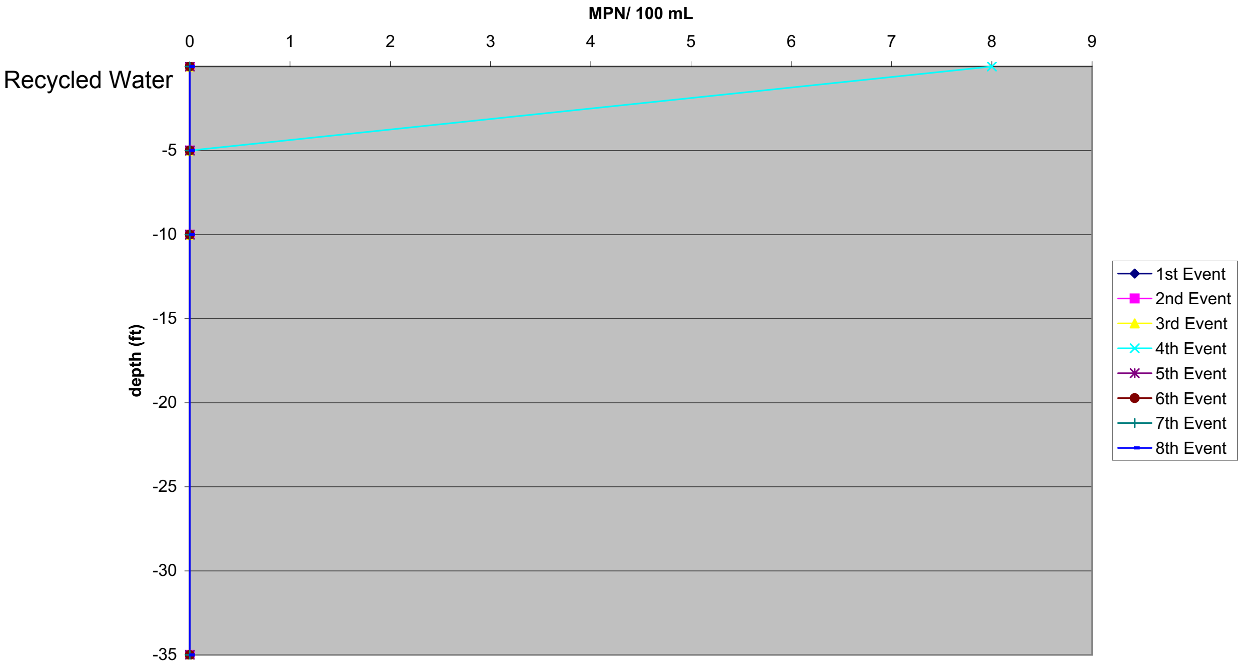
Note: non-detects are treated in the figure as zero.

Figure III-4-48A E. Coli



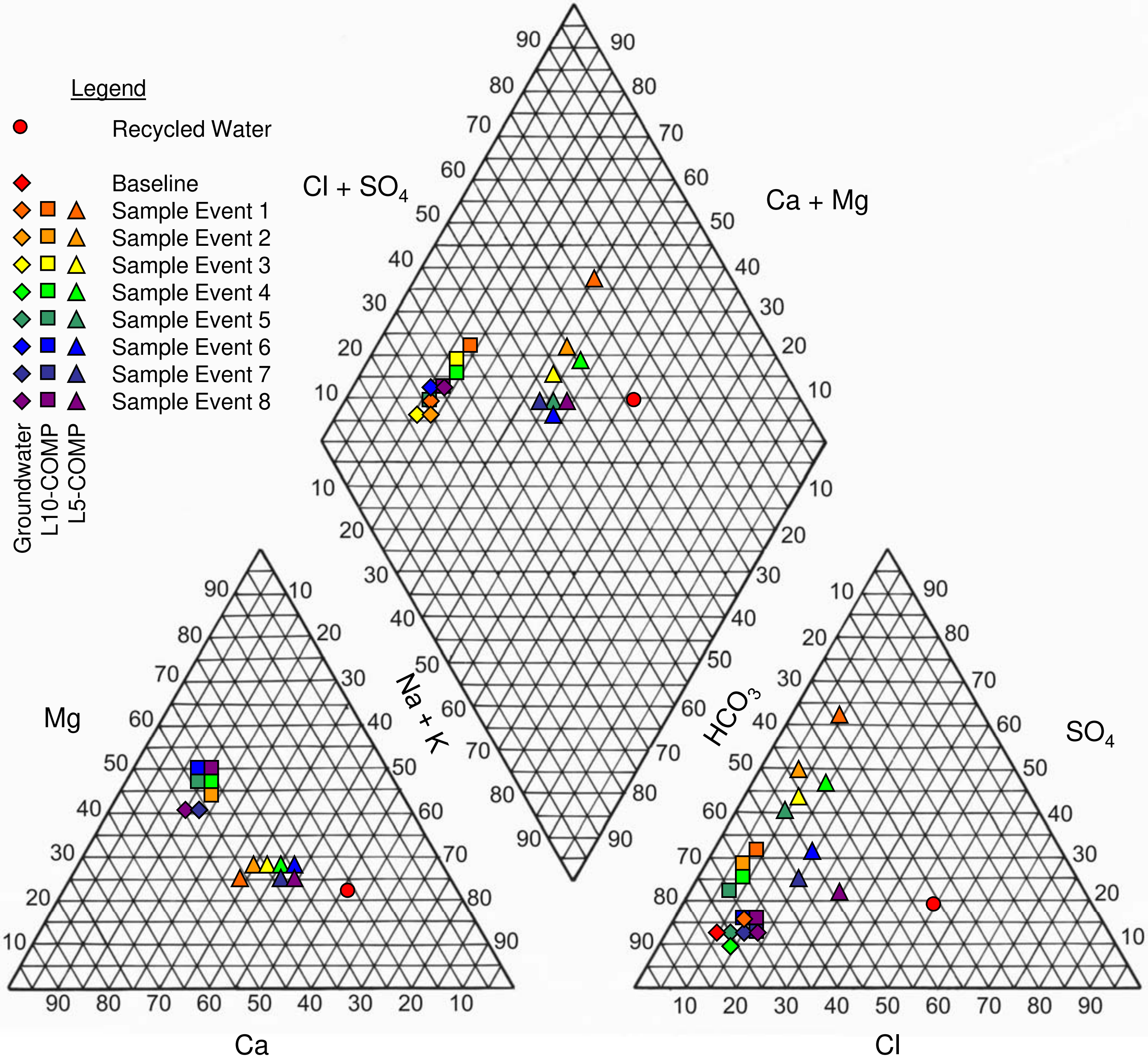
Note: non-detects are treated in the figure as zero.

Figure III-4-48B E. Coli



Note: non-detects are treated in the figure as zero.

Figure III-4-49 Piper Diagram Analysis



TABLES

TABLE III-3-1
CONSTITUENTS OF CONCERN
PILOT STUDY
RECYCLED WATER STUDY

Priority	Constituent	Method	Lab
1	ORP	multi-meter	field
2	pH	multi-meter	field
3	Chlorine, Total	Hach kit	field
4	Dissolved Oxygen	multi-meter	field
5	Alkalinity, Total	SM2320B	C&T
6	Bicarbonate Alkalinity	SM2320B	C&T
7	Boron	EPA 6010	C&T
8	Calcium	EPA 6010	C&T
9	Magnesium	EPA 6010	C&T
10	Sodium	EPA 6010	C&T
11	Potassium	EPA 6010	C&T
12	Sulfate	EPA 300.0	C&T
13	Nitrite	EPA 300.0	C&T
14	Nitrate	EPA 300.0	C&T
15	Chloride	EPA 300.0	C&T
16	Total Organic Carbon (TOC)	SM5310C	C&T
17	Total Filterable Residue at 180C (TDS)	SM2540C	C&T
18	Dissolved Organic Carbon	SM5310C	C&T
19	Bromodichloromethane	EPA 8260	C&T
20	Bromoform	EPA 8260	C&T
21	Chloroform	EPA 8260	C&T
22	Carbon Tetrachloride	EPA 8260	C&T
23	Dibromochloromethane	EPA 8260	C&T
24	Xylenes, Total	EPA 8260	C&T
25	Additional 8010-list VOCs	EPA 8260	C&T
26	Bromochloroacetic Acid	EPA 552.2	Subcontracted by C&T
27	Dibromoacetic Acid	EPA 552.2	Subcontracted by C&T
28	Dichloroacetic Acid	EPA 552.2	Subcontracted by C&T
29	Monobromoacetic Acid	EPA 552.2	Subcontracted by C&T
30	Monochloroacetic Acid	EPA 552.2	Subcontracted by C&T
31	Trichloroacetic Acid	EPA 552.2	Subcontracted by C&T
32	Heterotrophic Plate Count	SM 9215 B	EMLab P&K
33	Coliforms, Total	SM 9221 B	EMLab P&K
34	Fecal Coliforms	SM 9221 E	EMLab P&K
35	N-Nitroso Dimethylamine (NDMA)	EPA 1625	MWH
36	Perfluorochemicals	MWH LC/MS/MS	MWH
37	Phosphate	SM 4500P-E	C&T
38	Ethylenediaminetetraacetic acid (EDTA)	EPA 300 (mod)	subcontracted by MWH
39	Surfactants (MBAS)	SM 5540C	C&T
40	Bromide	EPA 300.0	Accutest / SCVWD
41	Nitrilotriacetic acid (NTA)	EPA 300 (mod)	subcontracted by MWH
42	E. Coli	SM 9221 F	EMLab P&K
43	Perchlorate	EPA 314.0	C&T
44	Cyanide	SM 4500CN E	C&T
45	Terbuthylazine	EPA 525 plus	MWH

Labs:
C&T - Curtis and Tompkins - 2323 Fifth Street, Berkeley, CA 94710
MWH - Montgomery Watson Harza Laboratories - 750 Royal Oaks Dr., Monrovia, CA 91016
EMLab P&K - EMLab P&K Laboratories - 1150 Bayhil Dr., Suite 100, San Bruno, CA 94066
Accutest - Accutest Laboratories - 3334 Victor Ct., Santa Clara, CA 95054
SCVWD - Santa Clara Valley Water District Laboratory Services Unit - 1026 Blossom Hill Rd., San Jose, CA 95123

TABLE III-3-2
SUMMARY OF PILOT STUDY EVENTS
PILOT STUDY
RECYCLED WATER STUDY

Task	Dates
Baseline Sampling Event	5/19/2008
Lysimeter Purge and Vacuum Recharge	8/15/2008
Recycled Water Irrigation Implementation	9/4/2008
Lysimeter Purge and Vacuum Recharge	9/16/2008
Lysimeter Vacuum Recharges	9/26/2008, 10/3/2008, 10/10/2008, 10/17/2008
Sampling Event 1	10/27/2008
Lysimeter Vacuum Recharges	10/27/2008, 11/7/2008, 11/14/2008
Sampling Event 1 (interim)	11/24/2008
Lysimeter Vacuum Recharges	11/24/2008, 12/5/2008
Sampling Event 2	12/15/2008
Lysimeter Vacuum Recharges	12/15/2008, 12/19/2008, 12/26/2008, 1/2/2009
Sampling Event 2 (interim)	1/5/2009
Lysimeter Vacuum Recharges	1/5/2009, 1/9/2009, 1/16/2009, 1/25/2009
Sampling Event 3	2/2/2009
Lysimeter Vacuum Recharges	2/2/2009, 2/13/2009, 2/20/2009, 2/27/2009
Sampling Event 3 (interim)	3/2/2009
Lysimeter Vacuum Recharges	3/2/2009, 3/6/2009, 3/13/2009, 3/20/2009, 3/27/2009, 4/10/2009, 4/24/2009
Sampling Event 4	4/28/2009
Lysimeter Vacuum Recharges	4/28/2009, 5/8/2009
Sampling Event 4 (interim)	5/18/2009
Lysimeter Vacuum Recharges	5/18/2009, 5/29/2009, 6/12/2009, 6/26/2009
Sampling Event 5	7/13/2009
Lysimeter Vacuum Recharges	7/13/2009, 7/27/2009
Sampling Event 5 (interim)	8/3/2009
Lysimeter Vacuum Recharges	8/3/2009, 8/7/2009, 8/21/2009, 9/4/2009
Sampling Event 6	9/28/2009
Lysimeter Vacuum Recharges	9/28/2009, 10/9/2009, 10/16/2009
Sampling Event 6 (interim)	10/19/2009
Lysimeter Vacuum Recharges	10/19/2009, 10/30/2009, 11/9/2009, 11/16/2009, 11/23/2009, 11/30/2009
Sampling Event 7	12/14/2009
Lysimeter Vacuum Recharges	12/14/2009, 12/21/2009
Sampling Event 7 (interim)	1/5/2010
Lysimeter Vacuum Recharges	1/5/2010, 1/25/2010, 2/8/2010, 2/22/2010
Sampling Event 8	3/1/2010
Lysimeter Vacuum Recharge	3/1/2010
Sampling Event 8 (interim)	3/15/2010

TABLE III-4-1
ANALYTICAL DATA
PILOT STUDY
RECYCLED WATER STUDY

	Location	IDT Source								
	Event	8th	7th	6th	5th	4th	3rd	2nd	1st	Baseline (5/19/2008)
Constituent	Units									
General Water Quality										
pH	pH unit	7.34	7.41	7.94	7.07	6.8	6.81	7.65	6.75	7.4
Alkalinity, Total (as CaCO3)	mg/L	210	170	170	170	200	180	170	170	190
Bicarbonate Alkalinity (as CaCO3)	mg/L	210	170	170	170	200	180	170	170	189
Total Filterable Residue at 180C (TDS)	mg/L	740	720	760	740	800	780	700	880	690
Total Organic Carbon (TOC)	mg/L	6.2	5.5	6.4	6.7	8	5.4	5.9	6.7	6.9
Dissolved Organic Carbon	mg/L	4.8	5.1	5.8	6.8	7.2	5.4	6.2	7.1	6.8
ORP	mV	149	174	124	84	78	111	126	128	417
Dissolved Oxygen	mg/L	7.19	1.76	6.26	5.02	5.69	8.1	6.28	1.6	0.04
Chlorine, Total	mg/L	0.07	1.26	0.12	0.13	0.14	0.04	0.1	0.3	8.8
Anions and Cations										
Chloride	mg/L	190	200	220	200	210	220	200	280	190
Sulfate	mg/L	100	94	99	94	100	95	89	110	94
Bromide	mg/L	0.28	0.32	0.25	0.25	0.27	0.38	0.18	0.38	ND 0.5
Cyanide	mg/L	0.02	0.01	ND 0.01	ND 0.01	0.02	ND 0.01	ND 0.01	0.02	ND 0.005
Boron	µg/L	390	380	480	420	480	480	440	460	480
Potassium	mg/L	12	13	17	13	15	16	13	19	16
Calcium	mg/L	52	46	54	44	60	56	51	64	54
Magnesium	mg/L	29	25	31	25	35	31	26	39	30
Sodium	mg/L	120	140	170	140	130	160	130	210	130
Nutrients										
Phosphate, Total as P	mg/L	0.21	0.22	0.6	0.53	0.62	0.36	0.26	0.28	NA
Nitrate as N	mg/L	7.7	10	10	12	15	9.1	10	12	9.6
Nitrite as N	mg/L	0.65	0.09	ND 0.5	0.13	0.23	0.06	0.14	0.85	ND 0.15
Anthropogenic Compounds										
Bromodichloromethane	µg/L	8.6	14	27	15	10	7.8	8.4	8.5	15
Bromoform	µg/L	0.8	2	2.9	1	0.6	1.4	1.2	1.5	1.3
Chloroform	µg/L	8.8	17	23	16	13	7	8.6	7.8	12
Dibromochloromethane	µg/L	4.2	7.2	14	6.3	3.9	5.2	4.6	5.3	7.1
Carbon Tetrachloride	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Xylenes (m,p-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 1
Xylenes (o-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Additional 8010/8020-list VOCs *	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloroacetic Acid	µg/L	ND 0.99	0.22 J	0.92 J	2	1.4	ND 1	ND 1	3.4	9.6
Dibromoacetic Acid	µg/L	0.37 J,P	ND 0.99	0.33 J	ND 1	ND 1	ND 1	ND 1	1.5	3.4
Dichloroacetic Acid	µg/L	0.57 J,P	0.64 J,P	1.8	3.9	3.7	ND 1	1.4	5.5	14
Monobromoacetic Acid	µg/L	ND 0.99	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monochloroacetic Acid	µg/L	ND 2	ND 2	4.2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
Trichloroacetic Acid	µg/L	ND 0.99	ND 0.99	3.8	6.8	5.1	ND 1	ND 1	3.3	9.7
N-Nitroso Dimethylamine (NDMA)	ng/L	320	390	240	350 D	420	460	380 BB,BD,L3	401	112
Terbuthylazine	µg/L	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	ND 0.1	0.1	ND 0.1
Perfluorochemicals (PFBA)	ng/L	12	ND 20	ND 40	ND 20	ND 20	ND 20	ND 20	ND 20	ND 50
Perfluorochemicals (PFOS)	ng/L	51	39	87	46 D	34	78	67 D	38	ND 50
Perfluorochemicals (PFOA)	ng/L	70	61	100	41	51	43	65 D	79	ND 20
Nitrilotriacetic acid (NTA)	µg/L	NA	NA	NA	NA	NA	NA	NA	ND 100	ND 100
Ethylenediaminetetraacetic acid (EDTA)	µg/L	ND 100	ND 100	ND 100	ND 100	ND 100	ND 100	ND 100	ND 100	ND 100
Surfactants (MBAS)	mg/L	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	ND 0.2	0.21
Perchlorate	µg/L	NA	NA	NA	NA	NA	NA	NA	ND 4	ND 4
Biological Indicators										
Heterotrophic Plate Count	CFU/ 1mL	<1 D	>57000	>57000	15000	>57000	64	6300	3700	2
Coliforms, Total	MPN/ 100 mL	ND 2	22	24	24	8	ND 2	24	18	ND 2
Fecal Coliforms	MPN/ 100 mL	ND 2	ND 2	2	2	24	ND 2	ND 2	18	ND 2
E. Coli	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	8	ND 2	ND 2	ND 2	ND 2

Notes
* Detections of VOCs include TCE, cis-1,2-DCE and Freon 113
See Table III-4-2 for Legend of Qualifiers.

TABLE III-4-1
ANALYTICAL DATA
PILOT STUDY
RECYCLED WATER STUDY

	Location	**L5-COMP**							
	Event	**8th**	**7th**	**6th**	**5th**	**4th**	**3rd**	**2nd**	**1st**
Constituent	**Units**								
General Water Quality									
pH	pH unit	7.76	7.73	7.28	7.24	6.93	7.24	7.66	6.43
Alkalinity, Total (as CaCO3)	mg/L	600	590	670	720	710	640	590	470
Bicarbonate Alkalinity (as CaCO3)	mg/L	600	590	670	720	640	640	590	470
Total Filterable Residue at 180C (TDS)	mg/L	1470	1240	1380	1690	2000	1610	1750	2180
Total Organic Carbon (TOC)	mg/L	11	5.8	7	7.8	8.7	6.5	7.3	73
Dissolved Organic Carbon	mg/L	8.2	6.8	5.9 B	7.8	7.8	6.2	11	78
ORP	mV	124	182	103	90	60	121	148	25
Dissolved Oxygen	mg/L	9.27	10.28	6.98	6.48	7.36	11.3	10.1	5.84
Chlorine, Total	mg/L	0.25	0.11	0.12	0.19	0.07	0.09	0.42	0.13
Anions and Cations									
Chloride	mg/L	270	150	160	120	130	92	86	87
Sulfate	mg/L	270	260	370	540	740	550	660	980
Bromide	mg/L	0.27	0.34	NA	0.21	0.26	0.16	0.25	0.43
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Boron	µg/L	250	260	270	320	400	300	340	270
Potassium	mg/L	5.4	3.2	2.5	5	7.5	3.7	5.4	9.3
Calcium	mg/L	140	120	160	180	210	180	180	270
Magnesium	mg/L	66	53	82	77	99	90	81	100
Sodium	mg/L	210	140	260	250	290	230	200	260
Nutrients									
Phosphate, Total as P	mg/L	0.059	0.05	0.21	0.053	0.042	0.047	0.045	0.031
Nitrate as N	mg/L	1.8	0.98	1.7	1.7	2.3	0.23	ND 0.10	ND 0.25
Nitrite as N	mg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.10	ND 0.10	ND 0.10	ND 0.05
Anthropogenic Compounds									
Bromodichloromethane	µg/L	ND 0.5	ND 0.5	0.7	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 42
Bromoform	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 42
Chloroform	µg/L	ND 0.5	ND 0.5	1.1	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 42
Dibromochloromethane	µg/L	ND 0.5	ND 0.5	0.8	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 42
Carbon Tetrachloride	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 42
Xylenes (m,p-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 42
Xylenes (o-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 42
Additional 8010/8020-list VOCs *	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloroacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Dibromoacetic Acid	µg/L	ND 1	ND 1	0.17 J	ND 1	ND 1	ND 1	ND 1	ND 1
Dichloroacetic Acid	µg/L	ND 1	0.26 J	0.19 J	ND 1	ND 1	ND 1	ND 1	ND 1
Monobromoacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monochloroacetic Acid	µg/L	1.3 J,P	1.5 J	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
Trichloroacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
N-Nitroso Dimethylamine (NDMA)	ng/L	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	5	10
Terbuthylazine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Perfluorochemicals (PFBA)	ng/L	ND 10	ND 20	ND 20	24	47	ND 20	43	71
Perfluorochemicals (PFOS)	ng/L	ND 5	9	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5
Perfluorochemicals (PFOA)	ng/L	ND 5	ND 5	ND 5	17	16	ND 5	6.4	15
Nitrilotriacetic acid (NTA)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Ethylenediaminetetraacetic acid (EDTA)	µg/L	NA	NA	NA	NA	NA	NA	ND 100	NA
Surfactants (MBAS)	mg/L	NA	NA	NA	NA	NA	NA	ND 0.2	ND 0.2
Perchlorate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Biological Indicators									
Heterotrophic Plate Count	CFU/ 1mL	3100	3400	3900	1700	560	3900	6500	10000
Coliforms, Total	MPN/ 100 mL	54	2	240	ND 2	ND 2	ND 2	140	2
Fecal Coliforms	MPN/ 100 mL	ND 2	ND 2	2	ND 2	ND 2	ND 2	ND 2	2
E. Coli	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2

Notes
* Detections of VOCs include TCE, cis-1,2-DCE and Freon 11
See Table III-4-2 for Legend of Qualifiers.

TABLE III-4-1
ANALYTICAL DATA
PILOT STUDY
RECYCLED WATER STUDY

	Location	L10-COMP							
	Event	8th	7th	6th	5th	4th	3rd	2nd	1st
Constituent	Units								
General Water Quality									
pH	pH unit	7.1	7.23	7.4	7.55	7.21	6.84	7.84	6.55
Alkalinity, Total (as CaCO3)	mg/L	680	700	670	730	720	670	710	660
Bicarbonate Alkalinity (as CaCO3)	mg/L	680	700	670	730	660	670	710	660
Total Filterable Residue at 180C (TDS)	mg/L	1060	1060	1010	1080	1070	1150	1160	1280
Total Organic Carbon (TOC)	mg/L	4.6	3.5	2.9	3.1	3.1	3.2	4.8	6.6
Dissolved Organic Carbon	mg/L	3.6	3.3	2.9	5.1	2.7	3.1	5	6.4
ORP	mV	137	179	96	100	75	120	101	69
Dissolved Oxygen	mg/L	8.44	8.88	6.22	8.08	8.36	9.89	8.37	6.21
Chlorine, Total	mg/L	0.16	1.05	0.08	0.14	0.12	0.04	0.21	0.06
Anions and Cations									
Chloride	mg/L	130	120	96	81	81	71	72	77
Sulfate	mg/L	130	140	150	170	220	240	270	320
Bromide	mg/L	0.26	0.3	0.25	0.23	0.24	0.22	0.17	0.15 J
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA
Boron	µg/L	240	280	300	230	290	270	300	330
Potassium	mg/L	1.1	1.3	1.2	1.2	1.5	1.4	2.3	3.6
Calcium	mg/L	120	130	160	130	150	150	150	170
Magnesium	mg/L	98	110	130	100	120	110	110	130
Sodium	mg/L	66	63	82	70	75	70	78	87
Nutrients									
Phosphate, Total as P	mg/L	0.048	0.04	0.062	0.042	ND 0.03	0.036	0.042	0.047
Nitrate as N	mg/L	3.1	3.2	3.4	2.4	2.1	1.9	1.7	1.8
Nitrite as N	mg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.10	ND 0.05	ND 0.05
Anthropogenic Compounds									
Bromodichloromethane	µg/L	ND 0.5	ND 0.5	0.7	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Bromoform	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Chloroform	µg/L	ND 0.5	ND 0.5	1.7	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Dibromochloromethane	µg/L	ND 0.5	ND 0.5	0.7	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Carbon Tetrachloride	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Xylenes (m,p-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Xylenes (o-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Additional 8010/8020-list VOCs *	µg/L	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloroacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Dibromoacetic Acid	µg/L	ND 1	ND 1	0.51 J	ND 1	ND 1	ND 1	ND 1	ND 1
Dichloroacetic Acid	µg/L	ND 1	0.42 J,P	0.40 J	ND 1	ND 1	ND 1	ND 1	ND 1
Monobromoacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monochloroacetic Acid	µg/L	0.60 J	0.65 J	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
Trichloroacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
N-Nitroso Dimethylamine (NDMA)	ng/L	ND 2	ND 2 S7	3.3	5	2	15	8.5	23
Terbuthylazine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Perfluorochemicals (PFBA)	ng/L	ND 10	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	28
Perfluorochemicals (PFOS)	ng/L	ND 5	ND 5	6	ND 5	ND 5	ND 5	ND 5	ND 5
Perfluorochemicals (PFOA)	ng/L	ND 5	ND 5	ND 5	6.9	ND 5	ND 5	ND 5	13
Nitrilotriacetic acid (NTA)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Ethylenediaminetetraacetic acid (EDTA)	µg/L	NA	NA	NA	NA	NA	NA	ND 100	ND 100
Surfactants (MBAS)	mg/L	NA	NA	NA	NA	NA	NA	ND 0.2	ND 0.2
Perchlorate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA
Biological Indicators									
Heterotrophic Plate Count	CFU/ 1mL	1600	2800	890	2700	300	1000	3400	2800
Coliforms, Total	MPN/ 100 mL	4	ND 2	24	ND 2	ND 2	ND 2	81	2
Fecal Coliforms	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	2
E. Coli	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2

Notes
* Detections of VOCs include TCE, cis-1,2-DCE and Freon 11
See Table III-4-2 for Legend of Qualifiers.

TABLE III-4-1
ANALYTICAL DATA
PILOT STUDY
RECYCLED WATER STUDY

	Location	MW-1											
	Event	8th	7th	6th	5th	4th	3rd	2nd	1st	Baseline (5/19/2008)	Baseline (12/20/2007)	Baseline (8/16/2007)	Baseline (5/17/2007)
Constituent	**Units**												
General Water Quality													
pH	pH unit	6.65	6.61	6.41	6.46	6.48	6.88	6.8	6.75	6.24	6.6	6.7	6.7
Alkalinity, Total (as CaCO3)	mg/L	330	300	310	360	376	270	300	320	420	331	383	460
Bicarbonate Alkalinity (as CaCO3)	mg/L	330	300	310	360	370	270	300	320	426	331	383	460
Total Filterable Residue at 180C (TDS)	mg/L	570	520	530	580	550	440	490	550	580	552	738	678
Total Organic Carbon (TOC)	mg/L	0.66	0.73	0.54	0.58	ND 0.5	ND 0.5	0.69	0.82	0.5	0.7	0.91	0.81
Dissolved Organic Carbon	mg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	0.57	1.5	1.4	1.6
ORP	mV	177	182	190	112	915	126	130	127	174	NA	NA	NA
Dissolved Oxygen	mg/L	1.24	1.47	1.64	1.94	2.14	1.99	1.39	1.47	0.01	NA	NA	NA
Chlorine, Total	mg/L	0.27	0.36	0.43	2.04	2.02	2.12	2.1	2.17	NA	NA	NA	NA
Anions and Cations													
Chloride	mg/L	60	57	59	60	60	49	49	54	61	50	72	55
Sulfate	mg/L	68	63	72	76	80	55	60	71	89	84.4	129	113
Bromide	mg/L	0.22	0.24	0.2	0.22	0.23	0.17	0.14	ND 0.065	ND 0.5	0.23	0.32	0.32
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 0.005	NA	NA	NA
Boron	µg/L	170	170	200	190	200	160	180	200	180	189	197	185
Potassium	mg/L	1.1	0.66	0.61	0.77	0.98	0.6	0.95	0.73	2.3	0.8	1.1	1
Calcium	mg/L	77	65	85	83	90	64	68	86	100	83.3	122	101
Magnesium	mg/L	44	41	54	52	58	40	43	54	66	53	73.1	65.3
Sodium	mg/L	34	31	43	41	44	35	35	44	43	35.7	47.8	43.9
Nutrients													
Phosphate, Total as P	mg/L	0.42	0.86	0.04	0.11	0.11	0.073	0.06	0.034	NA	NA	NA	NA
Nitrate as N	mg/L	3.1	2.7	3.4	3.7	4	2.2	2.7	3.7	5.7	5.6	10	8.5
Nitrite as N	mg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	0.15	ND 0.05	ND 0.15	ND 0.4	ND 0.4	ND 0.4
Anthropogenic Compounds													
Bromodichloromethane	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Bromoform	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Chloroform	µg/L	ND 0.5	ND 0.5	ND 1.0	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Dibromochloromethane	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Carbon Tetrachloride	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Xylenes (m,p-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 1	NA	NA	NA
Xylenes (o-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NA	NA	NA
Additional 8010/8020-list VOCs *	µg/L	1.9	10.5	2.4	ND	ND	ND	1.4	2.5	ND	ND	ND	ND
Bromochloroacetic Acid	µg/L	ND 1	ND 1	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	NA	NA	NA
Dibromoacetic Acid	µg/L	ND 1	ND 1	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Dichloroacetic Acid	µg/L	ND 1	ND 1	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monobromoacetic Acid	µg/L	ND 1	ND 1	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monochloroacetic Acid	µg/L	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
Trichloroacetic Acid	µg/L	ND 1	ND 1	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
N-Nitroso Dimethylamine (NDMA)	ng/L	4.1	2.9	ND 2	2.1	2.7	ND 2	ND 2 BD,L3	ND 2	ND 2	ND 1.9	ND 2000	ND 4800
Terbuthylazine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 0.1	NA	NA	NA
Perfluorochemicals (PFBA)	ng/L	ND 10	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 50	NA	NA	NA
Perfluorochemicals (PFOS)	ng/L	ND 5	ND 5	10	ND 5	ND 5	ND 5	ND 5	ND 5	ND 50	NA	NA	NA
Perfluorochemicals (PFOA)	ng/L	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 20	NA	NA	NA
Nitrilotriacetic acid (NTA)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 100	NA	NA	NA
Ethylenediaminetetraacetic acid (EDTA)	µg/L	NA	NA	NA	NA	NA	NA	ND 100	ND 100	ND 100	NA	NA	NA
Surfactants (MBAS)	mg/L	NA	NA	NA	NA	NA	NA	ND 0.2	ND 0.2	ND 0.1	NA	NA	NA
Perchlorate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	4.3	NA	NA	NA
Biological Indicators													
Heterotrophic Plate Count	CFU/ 1mL	1700	7800	430	2500	2300	3600	4800	1400	2000	NA	NA	NA
Coliforms, Total	MPN/ 100 mL	14	46	ND 2	ND 2	ND 2	ND 2	2	ND 2	11	NA	NA	NA
Fecal Coliforms	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	NA	NA	NA
E. Coli	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	NA	NA	NA

Notes
* Detections of VOCs include TCE, cis-1,2-DCE and Freon 11
See Table III-4-2 for Legend of Qualifiers.

TABLE III-4-1
ANALYTICAL DATA
PILOT STUDY
RECYCLED WATER STUDY

	Location	MW-2											
	Event	8th	7th	6th	5th	4th	3rd	2nd	1st	Baseline (5/19/2008)	Baseline (12/20/2007)	Baseline (8/16/2007)	Baseline (5/16/2007)
Constituent	**Units**												
General Water Quality													
pH	pH unit	6.88	6.9	6.72	6.79	6.71	6.8	6.84	6.8	6.51	6.7	6.9	6.9
Alkalinity, Total (as CaCO3)	mg/L	300	280	240	300	340	300	410	300	320	299	308	334
Bicarbonate Alkalinity (as CaCO3)	mg/L	300	280	240	300	340	300	410	300	320	299	308	334
Total Filterable Residue at 180C (TDS)	mg/L	430	400	400	420	440	410	440	490	380	468	486	508
Total Organic Carbon (TOC)	mg/L	0.75	0.86	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.68	0.75	0.44	0.76	0.6	0.87
Dissolved Organic Carbon	mg/L	ND 1	ND 1	ND 1	2.1	ND 1	ND 1	ND 1	ND 1	0.44	1	1.2	1.6
ORP	mV	78	74	72	68	70	118	111	118	188	NA	NA	NA
Dissolved Oxygen	mg/L	1.71	1.92	2.4	2.1	1.2	0.87	0.7	0.74	0.05	NA	NA	NA
Chlorine, Total	mg/L	0.33	1.67	1.72	2.2	2.2	2.2	2.2	2.2	NA	NA	NA	NA
Anions and Cations													
Chloride	mg/L	36	29	26	28	36	25	34	39	26	37	38	33
Sulfate	mg/L	45	35	34	38	46	35	46	48	40	52.5	56.8	63.7
Bromide	mg/L	0.13	0.13	0.12	0.11	0.15	0.1	0.07	ND 0.065	ND 0.5	0.17	0.18	0.22
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 0.005	NA	NA	NA
Boron	µg/L	130	140	150	140	180	150	150	160	140	177	162	171
Potassium	mg/L	0.98	0.84	0.9	0.74	0.91	0.87	0.65	1.1	1.4	1	1.1	1.1
Calcium	mg/L	58	49	61	58	70	65	63	74	62	71.8	78.9	74.4
Magnesium	mg/L	35	30	36	33	44	38	35	41	36	41.2	45	44.5
Sodium	mg/L	30	23	30	31	37	30	29	34	32	33	40.1	42
Nutrients													
Phosphate, Total as P	mg/L	0.04	0.068	0.17	0.092	0.035	0.13	0.098	0.39	NA	NA	NA	NA
Nitrate as N	mg/L	2.1	2.1	3.1	2.6	3.2	2.8	3.5	3.9	3.6	5.9	7.3	9.3
Nitrite as N	mg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.15	ND 0.4	ND 0.4	ND 0.4
Anthropogenic Compounds													
Bromodichloromethane	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Bromoform	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Chloroform	µg/L	ND 0.5	ND 0.5	ND 1.0	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Dibromochloromethane	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Carbon Tetrachloride	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Xylenes (m,p-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 1	NA	NA	NA
Xylenes (o-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NA	NA	NA
Additional 8010/8020-list VOCs *	µg/L	ND	ND	ND	ND	ND	0.5	1.4	2.7	ND	ND	ND	ND
Bromochloroacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	NA	NA	NA
Dibromoacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Dichloroacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monobromoacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monochloroacetic Acid	µg/L	0.26 J	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
Trichloroacetic Acid	µg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
N-Nitroso Dimethylamine (NDMA)	ng/L	4.1	3.6	ND 2 R4	ND 2	ND 2	ND 2	ND 2 BD,L3	ND 2	ND 2	ND 1.9	ND 2000	ND 4800
Terbuthylazine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 0.1	NA	NA	NA
Perfluorochemicals (PFBA)	ng/L	ND 10	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 50	NA	NA	NA
Perfluorochemicals (PFOS)	ng/L	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 50	NA	NA	NA
Perfluorochemicals (PFOA)	ng/L	ND 5	ND 5	ND 5	9.9	ND 5	ND 5	9	ND 5	ND 20	NA	NA	NA
Nitrilotriacetic acid (NTA)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 100	NA	NA	NA
Ethylenediaminetetraacetic acid (EDTA)	µg/L	NA	NA	NA	NA	NA	NA	ND 100	ND 100	ND 100	NA	NA	NA
Surfactants (MBAS)	mg/L	NA	NA	NA	NA	NA	NA	ND 0.2	ND 0.2	ND 0.1	NA	NA	NA
Perchlorate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 4	NA	NA	NA
Biological Indicators													
Heterotrophic Plate Count	CFU/ 1mL	2900	3500	1500	380	730	1100	4700	1400	92	NA	NA	NA
Coliforms, Total	MPN/ 100 mL	ND 2	46	ND 2	ND 2	ND 2	20	5	ND 2	2	NA	NA	NA
Fecal Coliforms	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	NA	NA	NA
E. Coli	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	NA	NA	NA

Notes
* Detections of VOCs include TCE, cis-1,2-DCE and Freon 11
See Table III-4-2 for Legend of Qualifiers.

TABLE III-4-1
ANALYTICAL DATA
PILOT STUDY
RECYCLED WATER STUDY

	Location	MW-3											
	Event	8th	7th	6th	5th	4th	3rd	2nd	1st	Baseline (5/19/2008)	Baseline (12/20/2007)	Baseline (8/16/2007)	Baseline (5/17/2007)
Constituent	**Units**												
General Water Quality													
pH	pH unit	6.59	6.63	6.41	6.49	6.65	6.8	6.86	6.79	6.65	7	7.2	7.1
Alkalinity, Total (as CaCO3)	mg/L	450	440	390	460	490	430	400	380	490	402	369	380
Bicarbonate Alkalinity (as CaCO3)	mg/L	450	440	390	460	490	430	400	380	492	402	369	380
Total Filterable Residue at 180C (TDS)	mg/L	720	640	580	700	760	550	560	560	610	546	562	616
Total Organic Carbon (TOC)	mg/L	0.79	ND 0.5	ND 0.5	0.55	0.61	ND 0.5	0.63	0.75	0.48	0.68	0.62	0.72
Dissolved Organic Carbon	mg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	0.49	0.92	1.6	1.6
ORP	mV	117	91	98	119	119	135	143	144	178	NA	NA	NA
Dissolved Oxygen	mg/L	1.41	2.25	2.65	3.85	0.84	0.77	0.8	0.88	0.04	NA	NA	NA
Chlorine, Total	mg/L	0.56	0.71	0.24	0.31	0.29	0.21	0.26	0.28	NA	NA	NA	NA
Anions and Cations													
Chloride	mg/L	95	71	59	60	71	47	48	51	45	35	41	33
Sulfate	mg/L	70	60	62	69	76	55	54	56	65	63.1	72.2	81.7
Bromide	mg/L	0.23	0.26	0.19	0.22	0.25	0.16	0.13	ND 0.065	ND 0.5	0.15	0.19	0.22
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 0.005	NA	NA	NA
Boron	µg/L	190	180	210	190	240	190	190	200	200	210	207	229
Potassium	mg/L	0.71	ND 0.5	ND 0.5	ND 0.5	0.55	ND 0.5	0.51	ND 0.5	0.85	ND 0.5	0.5	ND 0.5
Calcium	mg/L	120	88	97	90	120	98	85	92	100	90.8	96.2	92
Magnesium	mg/L	59	53	58	53	73	60	51	62	61	55	55.7	52.9
Sodium	mg/L	45	34	41	38	47	41	36	46	42	36.4	43.3	44.5
Nutrients													
Phosphate, Total as P	mg/L	0.046	0.1	0.051	0.055	0.041	0.049	0.086	0.072	NA	NA	NA	NA
Nitrate as N	mg/L	5.4	3.4	2.5	7.9	8.2	2.9	2.2	2.1	6.3	3.4	5.2	8.3
Nitrite as N	mg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.15	ND 0.4	ND 0.4	ND 0.4
Anthropogenic Compounds													
Bromodichloromethane	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Bromoform	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Chloroform	µg/L	ND 0.5	ND 0.5	ND 1.0	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Dibromochloromethane	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Carbon Tetrachloride	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Xylenes (m,p-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 1	NA	NA	NA
Xylenes (o-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NA	NA	NA
Additional 8010/8020-list VOCs *	µg/L	ND	ND	ND	ND	ND	0.5	2	3.6	ND	ND	ND	ND
Bromochloroacetic Acid	µg/L	ND 1	ND 0.99	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	NA	NA	NA
Dibromoacetic Acid	µg/L	ND 1	ND 0.99	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Dichloroacetic Acid	µg/L	ND 1	ND 0.99	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monobromoacetic Acid	µg/L	ND 1	ND 0.99	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monochloroacetic Acid	µg/L	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
Trichloroacetic Acid	µg/L	ND 1	ND 0.99	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
N-Nitroso Dimethylamine (NDMA)	ng/L	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2 BD,L3	ND 2	ND 2	ND 1.9	ND 2000	ND 4800
Terbuthylazine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 0.1	NA	NA	NA
Perfluorochemicals (PFBA)	ng/L	ND 10	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 50	NA	NA	NA
Perfluorochemicals (PFOS)	ng/L	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	ND 50	NA	NA	NA
Perfluorochemicals (PFOA)	ng/L	ND 5	ND 5	ND 5	9.9	ND 5	ND 5	ND 5	ND 5	ND 20	NA	NA	NA
Nitrilotriacetic acid (NTA)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 100	NA	NA	NA
Ethylenediaminetetraacetic acid (EDTA)	µg/L	NA	NA	NA	NA	NA	NA	ND 100	ND 100	ND 100	NA	NA	NA
Surfactants (MBAS)	mg/L	NA	NA	NA	NA	NA	NA	ND 0.2	ND 0.2	ND 0.1	NA	NA	NA
Perchlorate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 4	NA	NA	NA
Biological Indicators													
Heterotrophic Plate Count	CFU/ 1mL	1900	810	220	340	510	3100	3900	1700	65	NA	NA	NA
Coliforms, Total	MPN/ 100 mL	2	140	ND 2	ND 2	ND 2	ND 2	8	ND 2	ND 2	NA	NA	NA
Fecal Coliforms	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	NA	NA	NA
E. Coli	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	NA	NA	NA

Notes
* Detections of VOCs include TCE, cis-1,2-DCE and Freon 11
See Table III-4-2 for Legend of Qualifiers.

TABLE III-4-1
ANALYTICAL DATA
PILOT STUDY
RECYCLED WATER STUDY

	Location	MW-4											
	Event	8th	7th	6th	5th	4th	3rd	2nd	1st	Baseline (5/19/2008)	Baseline (12/20/2007)	Baseline (8/16/2007)	Baseline (5/16/2007)
Constituent	**Units**												
General Water Quality													
pH	pH unit	6.79	6.83	6.61	6.75	6.68	6.9	6.87	6.84	7.4	6.6	6.8	6.8
Alkalinity, Total (as CaCO3)	mg/L	360	350	390	460	490	430	410	430	510	314	323	311
Bicarbonate Alkalinity (as CaCO3)	mg/L	360	350	390	460	490	430	410	430	508	314	323	311
Total Filterable Residue at 180C (TDS)	mg/L	560	560	590	670	720	600	560	610	630	464	508	484
Total Organic Carbon (TOC)	mg/L	0.59	ND 0.5	0.6	0.56	0.64	ND 0.5	0.75	0.88	0.86	0.77	0.57	0.57
Dissolved Organic Carbon	mg/L	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	0.9	1.1	1.3	1.4
ORP	mV	144	89	98	112	110	89	89	91	192	NA	NA	NA
Dissolved Oxygen	mg/L	1.07	1.14	1.07	0.9	4.94	0.51	0.57	0.61	0.05	NA	NA	NA
Chlorine, Total	mg/L	0.28	0.3	0.24	0.27	2.07	1.07	1.14	1.22	NA	NA	NA	NA
Anions and Cations													
Chloride	mg/L	61	59	56	61	57	43	42	44	50	37	50	31
Sulfate	mg/L	61	59	68	73	71	60	62	66	69	64.3	74.2	69.9
Bromide	mg/L	0.2	0.21	0.18	0.22	0.2	0.15	0.12	ND 0.065	ND 0.5	0.15	0.17	0.17
Cyanide	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 0.005	NA	NA	NA
Boron	µg/L	170	150	230	200	240	200	210	230	200	193	189	169
Potassium	mg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	0.51	ND 0.5	0.81	ND 0.5	ND 0.5	ND 0.5
Calcium	mg/L	81	64	110	110	110	100	91	110	110	77.6	84.7	74.8
Magnesium	mg/L	44	36	57	56	65	56	51	62	61	44.1	47.2	41.1
Sodium	mg/L	33	25	41	40	44	41	38	48	41	33.9	39.1	35.3
Nutrients													
Phosphate, Total as P	mg/L	ND 0.03	ND 0.03	0.05	ND 0.03	0.065	0.034	0.12	0.036	NA	NA	NA	NA
Nitrate as N	mg/L	1.6	1.7	2.6	3.2	3.1	2.6	2.5	3	4	3.5	5.6	3.3
Nitrite as N	mg/L	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.05	ND 0.15	ND 0.4	ND 0.4	ND 0.4
Anthropogenic Compounds													
Bromodichloromethane	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Bromoform	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Chloroform	µg/L	ND 0.5	ND 0.5	ND 1.0	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Dibromochloromethane	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Carbon Tetrachloride	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5
Xylenes (m,p-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 1	NA	NA	NA
Xylenes (o-xylenes)	µg/L	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	ND 0.5	NA	NA	NA
Additional 8010/8020-list VOCs *	µg/L	ND	ND	ND	ND	ND	ND	1.4	3.5	ND	ND	ND	ND
Bromochloroacetic Acid	µg/L	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	NA	NA	NA
Dibromoacetic Acid	µg/L	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Dichloroacetic Acid	µg/L	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monobromoacetic Acid	µg/L	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
Monochloroacetic Acid	µg/L	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2
Trichloroacetic Acid	µg/L	ND 0.99	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1	ND 1
N-Nitroso Dimethylamine (NDMA)	ng/L	3.4	2.8	ND 2	ND 2	2.4	ND 2	ND 2 BD,L3	ND 2	ND 2	ND 1.9	ND 2000	ND 4800
Terbuthylazine	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 0.1	NA	NA	NA
Perfluorochemicals (PFBA)	ng/L	ND 10	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 20	ND 50	NA	NA	NA
Perfluorochemicals (PFOS)	ng/L	ND 5	ND 5	ND 5	ND 5	ND 5	ND 5	13	ND 5	ND 50	NA	NA	NA
Perfluorochemicals (PFOA)	ng/L	ND 5	ND 5	ND 5	15	ND 5	ND 5	ND 5	ND 5	ND 20	NA	NA	NA
Nitrilotriacetic acid (NTA)	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 100	NA	NA	NA
Ethylenediaminetetraacetic acid (EDTA)	µg/L	NA	NA	NA	NA	NA	NA	ND 100	ND 100	ND 100	NA	NA	NA
Surfactants (MBAS)	mg/L	NA	NA	NA	NA	NA	NA	ND 0.2	ND 0.2	ND 0.1	NA	NA	NA
Perchlorate	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	ND 4	NA	NA	NA
Biological Indicators													
Heterotrophic Plate Count	CFU/ 1mL	660 T	1000	370	560	1000	2000	11000	1600	1200	NA	NA	NA
Coliforms, Total	MPN/ 100 mL	ND 2	5	ND 2	ND 2	ND 2	2	8	ND 2	ND 2	NA	NA	NA
Fecal Coliforms	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	NA	NA	NA
E. Coli	MPN/ 100 mL	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	ND 2	NA	NA	NA

Notes

* Detections of VOCs include TCE, cis-1,2-DCE and Freon 11

See Table III-4-2 for Legend of Qualifiers.

TABLE III-4-2
LEGEND OF QUALIFIERS
PILOT STUDY
RECYCLED WATER STUDY

Flag	Description
B	Low recovery in MS/MSD and RPD out of limits.
BB	Target analyte detected in method blank at or above the laboratory minimum reporting limit (MRL). No major impact on the reported result since the target analyte is 10x the concentration level.
BD	Target analyte detected in method blank is above CA DHS recommended value of 0.5 and did not meet the internal blank limit of 1/3 MRL (1/3 of MRL = 0.7).
D	Field duplicate sample was out of RPD limits from regular sample.
J	The result is an estimated value detected outside the quantitation range.
L3	The associated blank spike reocvery was above method acceptance limits.
NA	Not analyzed.
ND	Not detected.
P	GC or HPLC confirmation criteria was exceeded. The RPD is greater than 40% between the two analytical results.
R4	MS/MSD RPD out exceeded method limits.
S7	Surrogate recovery was below laboratory and method acceptance limits. Unable to confirm matrix effect.
T	Detection found in associated trip blank.

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source
	Date	12/15/2008	12/15/2008	1/5/2009	1/5/2009	7/13/2009	7/13/2009	3/1/2010
	Sample Purpose	FD	REG	FD	REG	FD	REG	FD
Parameter	Units							
1,1,1,2-TETRACHLOROETHANE	µg/l	NT	NT	NT	NT	NT	NT	NT
1,1,1-TRICHLOROETHANE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
1,1,2,2-TETRACHLOROETHANE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
1,1,2-TRICHLOROETHANE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
1,1-DICHLOROETHANE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
1,1-DICHLOROETHENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
1,1-DICHLOROPROPENE	µg/l	NT	NT	NT	NT	NT	NT	NT
1,2,3-TRICHLOROBENZENE	µg/l	NT	NT	NT	NT	NT	NT	NT
1,2,3-TRICHLOROPROPANE	µg/l	NT	NT	NT	NT	NT	NT	NT
1,2,4-TRICHLOROBENZENE	µg/l	NT	NT	NT	NT	NT	NT	NT
1,2-DICHLOROBENZENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
1,2-DICHLOROETHANE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
1,2-DICHLOROPROPANE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
1,2-DIMETHYLBENZENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
1,3 Dichloropropene (Total)	µg/l	NT	NT	NT	NT	NT	NT	NT
1,3-DICHLOROBENZENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
1,3-DICHLOROPROPANE	µg/l	NT	NT	NT	NT	NT	NT	NT
1,4-DICHLOROBENZENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
2-BUTANONE	µg/l	NT	NT	NT	NT	NT	NT	NT
2-CHLOROETHYL VINYL ETHER	µg/l	ND 1.0	ND 1.0	NT	NT	ND 1.0	ND 1.0	NT
2-HEXANONE	µg/l	NT	NT	NT	NT	NT	NT	NT
4-METHYL-2-PENTANONE	µg/l	NT	NT	NT	NT	NT	NT	NT
ACETIC ACID, CHLORO-	µg/l	ND 2.0	ND 2.0	NT	NT	ND 2.0	ND 2.0	ND 2.0
Alkalinity Total, as CaCO3	µg/l	170000	170000	NT	NT	170000	170000 T	210000
Alkalinity, Bicarbonate as CaCO3	µg/l	170000	170000	NT	NT	170000	170000	210000
Alkalinity, Bicarbonate as HCO3	mg/l	NT	NT	NT	NT	NT	NT	NT
Alkalinity, Carbonate as CaCO3	µg/l	ND 4000	ND 6700	NT	NT	ND 6700	ND 6700	ND 6700
Alkalinity, Hydroxide as CaCO3	µg/l	ND 4000	ND 6700	NT	NT	ND 6700	ND 6700	ND 6700

Notes:

ND - denotes result was below the detection limit
NT - sample not tested for the given parameter
Project sample associated with field duplicate sample included for comparison

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source
	Date	12/15/2008	12/15/2008	1/5/2009	1/5/2009	7/13/2009	7/13/2009	3/1/2010
	Sample Purpose	FD	REG	FD	REG	FD	REG	FD
Parameter	Units							
BENZENE, 1,2,4-TRIMETHYL	µg/l	NT	NT	NT	NT	NT	NT	NT
BENZENE, 1,3,5-TRIMETHYL-	µg/l	NT	NT	NT	NT	NT	NT	NT
BENZENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
BORON	µg/l	410	440	NT	NT	420	420	400
BROMIDE	µg/l	NT	NT	170	180	250	250	280
BROMOBENZENE	µg/l	NT	NT	NT	NT	NT	NT	NT
BROMOCHLOROACETIC ACID	µg/l	ND 1.0	ND 1.0	NT	NT	1.7	2.0	ND 0.99
BROMOCHLOROMETHANE	µg/l	NT	NT	NT	NT	NT	NT	NT
BROMODICHLOROMETHANE	µg/l	8.4	8.4	NT	NT	14	15	8.1
BROMOFORM	µg/l	1.2	1.2	NT	NT	1.0	1.0	0.90
BROMOMETHANE	µg/l	ND 1.0	ND 1.0	NT	NT	ND 1.0	ND 1.0	ND 1.0
CALCIUM	µg/l	47000	51000	NT	NT	48000	44000	54000
CARBON TETRACHLORIDE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
CHLORIDE	µg/l	200000	200000	NT	NT	200000	200000	190000
CHLOROBENZENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
CHLOROETHANE	µg/l	ND 1.0	ND 1.0	NT	NT	ND 1.0	ND 1.0	ND 1.0
CHLOROFORM	µg/l	8.7	8.6	NT	NT	16	16	8.3
CHLOROMETHANE	µg/l	ND 1.0	ND 1.0	NT	NT	ND 1.0	ND 1.0	ND 1.0
cis-1,2-DICHLOROETHENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
cis-1,3-DICHLOROPROPENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
CUMENE	µg/l	NT	NT	NT	NT	NT	NT	NT
CYANIDE	µg/l	ND 10	ND 10	NT	NT	NT	ND 10	NT
Di-isopropyl ether	µg/l	NT	NT	NT	NT	NT	NT	NT
DIBROMOACETIC ACID	µg/l	ND 1.0	ND 1.0	NT	NT	ND 1.0	ND 1.0	0.43
DIBROMOCHLOROMETHANE	µg/l	4.9	4.6	NT	NT	6.1	6.3	3.9
DIBROMOMETHANE	µg/l	NT	NT	NT	NT	NT	NT	NT
DICHLOROACETIC ACID	µg/l	1.4	1.4	NT	NT	3.3	3.9	0.56
DICHLORODIFLUOROMETHANE	µg/l	NT	NT	NT	NT	NT	NT	NT

Notes:

ND - denotes result was below the detection limit
NT - sample not tested for the given parameter
Project sample associated with field duplicate sample included for comparison

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source
	Date	12/15/2008	12/15/2008	1/5/2009	1/5/2009	7/13/2009	7/13/2009	3/1/2010
	Sample Purpose	FD	REG	FD	REG	FD	REG	FD
Parameter	Units							
DISSOLVED ORGANIC CARBON	µg/l	6100	6200 T	NT	NT	6800	6800	5000
E. COLI, TOTAL	MPN/100ml	ND 2.0	ND 2.0	NT	NT	2.0	ND 2.0	ND 2.0
Ethyl tert-butyl ether	µg/l	NT	NT	NT	NT	NT	NT	NT
ETHYLBENZENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
ethylenediaminetetraacetic acid (EDTA)	µg/l	ND 100	ND 100	NT	NT	NT	ND 100	NT
FECAL COLIFORM	MPN/100ml	ND 2.0	ND 2.0	NT	NT	8.0	2.0	ND 2.0
FREON 113	µg/l	ND 5.0	ND 5.0	NT	NT	ND 5.0	ND 5.0	ND 2.0
HAA5, Total	µg/l	1.4	1.4	NT	NT	9.3	11	NT
HETEROTROPHIC PLATE COUNT (HPC)	CFU/ml	6600	6300	NT	NT	17000	15000	1000
HEXACHLOROBUTADIENE	µg/l	NT	NT	NT	NT	NT	NT	NT
m,p-Xylenes	µg/l	ND 0.50 mp	ND 0.50 mp	NT	NT	ND 0.50 mp	ND 0.50 mp	ND 0.50 mp
MAGNESIUM	µg/l	24000	26000	NT	NT	26000	25000	30000
METHYL tert-BUTYL ETHER	µg/l	NT	NT	NT	NT	NT	NT	ND 0.50
METHYLENE CHLORIDE	µg/l	ND 5.0	ND 5.0	NT	NT	ND 5.0	ND 5.0	ND 20
MONOBROMOACETIC ACID	µg/l	ND 1.0	ND 1.0	NT	NT	ND 1.0	ND 1.0	ND 0.99
n-BUTYLBENZENE	µg/l	NT	NT	NT	NT	NT	NT	NT
N-Nitrosodimethylamine	µg/l	0.46	0.38	NT	NT	0.24	0.35 D	0.33
n-PROPYLBENZENE	µg/l	NT	NT	NT	NT	NT	NT	NT
NAPHTHALENE	µg/l	NT	NT	NT	NT	NT	NT	NT
NITRATE	µg/l	10000	10000	NT	NT	12000	12000	7700
Nitrilotriacetic acid (NTA)	µg/l	NT	NT	NT	NT	NT	NT	NT
NITRITE	µg/l	130	140	NT	NT	110	130	660
o-CHLOROTOLUENE	µg/l	NT	NT	NT	NT	NT	NT	NT
ORTHOPHOSPHATE as P	µg/l	NT	NT	NT	NT	NT	NT	NT
p-CHLOROTOLUENE	µg/l	NT	NT	NT	NT	NT	NT	NT
p-CYMENE	µg/l	NT	NT	NT	NT	NT	NT	NT
Perchlorate	µg/l	NT	NT	NT	NT	NT	NT	NT
Perfluorobutyric acid (PFBA)	µg/l	ND 0.020	ND 0.020	NT	NT	ND 0.020	ND 0.020	ND 0.010

Notes:

ND - denotes result was below the detection limit
NT - sample not tested for the given parameter
Project sample associated with field duplicate sample included for comparison

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source	IDT Source
	Date	12/15/2008	12/15/2008	1/5/2009	1/5/2009	7/13/2009	7/13/2009	3/1/2010
	Sample Purpose	FD	REG	FD	REG	FD	REG	FD
Parameter	Units							
Perfluorooctanesulfonic acid (PFOS)	µg/l	0.044	0.067 D	NT	NT	0.060	0.046 D	0.046
Perfluorooctanoic acid (PFOA)	µg/l	0.043	0.065 D	NT	NT	0.051	0.041	0.062
Phosphate	µg/l	250	260	NT	NT	550	530	200
POTASSIUM	µg/l	13000	14000	NT	NT	12000	13000	12000
sec-BUTYLBENZENE	µg/l	NT	NT	NT	NT	NT	NT	NT
sec-DICHLOROPROPANE	µg/l	NT	NT	NT	NT	NT	NT	NT
SODIUM	µg/l	120000	130000	NT	NT	140000	140000 T	120000
STYRENE	µg/l	NT	NT	NT	NT	NT	NT	NT
SULFATE	µg/l	89000	89000	NT	NT	94000	94000	100000
SURFACTANTS (MBAS)	µg/l	ND 200	ND 200	NT	NT	NT	ND 200	NT
Terbuthylazine	µg/l	ND 0.10	ND 0.10	NT	NT	NT	ND 0.10	NT
Tert-amyl methyl ether	µg/l	NT	NT	NT	NT	NT	NT	NT
tert-BUTYLBENZENE	µg/l	NT	NT	NT	NT	NT	NT	NT
TETRACHLOROETHENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
TOLUENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
TOTAL COLIFORMS	MPN/100ml	14	24	NT	NT	46	24	ND 2.0
Total Dissolved Solids	µg/l	700000	700000	NT	NT	730000	740000	720000
TOTAL ORGANIC CARBON	µg/l	5800	5900	NT	NT	6800	6700	6300
trans-1,2-DICHLOROETHENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
trans-1,3-DICHLOROPROPENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
TRICHLOROACETIC ACID	µg/l	ND 1.0	ND 1.0	NT	NT	6.0	6.8	ND 0.99
TRICHLOROETHENE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
TRICHLOROFLUOROMETHANE	µg/l	ND 1.0	ND 1.0	NT	NT	ND 1.0	ND 1.0	ND 1.0
VINYL CHLORIDE	µg/l	ND 0.50	ND 0.50	NT	NT	ND 0.50	ND 0.50	ND 0.50
Xylenes (Total)	µg/l	NT	NT	NT	NT	NT	NT	NT

Notes:

ND - denotes result was below the detection limit
NT - sample not tested for the given parameter
Project sample associated with field duplicate sample included for comparison

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

Parameter	Location Date Sample Purpose Units	IDT Source 3/1/2010 REG	Rinseate Blank 2/2/2009 RB	SJSC Plant 5/19/2008 FD	SJSC Plant 5/19/2008 REG	Travel Blank 5/19/2008 TB	Travel Blank 12/15/2008 TB	Travel Blank 7/13/2009 TB
1,1,1,2-TETRACHLOROETHANE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
1,1,1-TRICHLOROETHANE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,1,2,2-TETRACHLOROETHANE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,1,2-TRICHLOROETHANE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,1-DICHLOROETHANE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,1-DICHLOROETHENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,1-DICHLOROPROPENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
1,2,3-TRICHLOROBENZENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
1,2,3-TRICHLOROPROPANE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
1,2,4-TRICHLOROBENZENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
1,2-DICHLOROBENZENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,2-DICHLOROETHANE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,2-DICHLOROPROPANE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,2-DIMETHYLBENZENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,3 Dichloropropene (Total)	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
1,3-DICHLOROBENZENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
1,3-DICHLOROPROPANE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
1,4-DICHLOROBENZENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
2-BUTANONE	µg/l	NT	NT	ND 5.0	ND 5.0	ND 5.0	NT	NT
2-CHLOROETHYL VINYL ETHER	µg/l	NT	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
2-HEXANONE	µg/l	NT	NT	ND 5.0	ND 5.0	ND 5.0	NT	NT
4-METHYL-2-PENTANONE	µg/l	NT	NT	ND 5.0	ND 5.0	ND 5.0	NT	NT
ACETIC ACID, CHLORO-	µg/l	ND 2.0	NT	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0
Alkalinity Total, as CaCO3	µg/l	210000	NT	190000	190000	ND 2000	ND 1000	2100
Alkalinity, Bicarbonate as CaCO3	µg/l	210000	NT	NT	NT	NT	ND 1000	ND 1000
Alkalinity, Bicarbonate as HCO3	mg/l	NT	NT	230	230	ND 2.0	NT	NT
Alkalinity, Carbonate as CaCO3	µg/l	ND 6700	NT	ND 2000	ND 2000	ND 2000	ND 1000	ND 1000
Alkalinity, Hydroxide as CaCO3	µg/l	ND 6700	NT	ND 2000	ND 2000	ND 2000	ND 1000	ND 1000

Notes:

ND - denotes result was below the detection limit

NT - sample not tested for the given parameter

Project sample associated with field duplicate sample included for comparison

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	IDT Source	Rinseate Blank	SJSC Plant	SJSC Plant	Travel Blank	Travel Blank	Travel Blank
	Date	3/1/2010	2/2/2009	5/19/2008	5/19/2008	5/19/2008	12/15/2008	7/13/2009
	Sample Purpose	REG	RB	FD	REG	TB	TB	TB
Parameter	Units							
BENZENE, 1,2,4-TRIMETHYL	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
BENZENE, 1,3,5-TRIMETHYL-	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
BENZENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
BORON	µg/l	390	NT	480	480	ND 10	ND 100	ND 100
BROMIDE	µg/l	280	NT	ND 500	ND 500	ND 500	NT	ND 50
BROMOBENZENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
BROMOCHLOROACETIC ACID	µg/l	ND 0.99	NT	10	9.6	ND 1.0	ND 1.0	ND 1.0
BROMOCHLOROMETHANE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
BROMODICHLOROMETHANE	µg/l	8.6	ND 0.50	16	15	ND 0.50	ND 0.50	ND 0.50
BROMOFORM	µg/l	0.80	ND 0.50	1.3	1.3	ND 0.50	ND 0.50	ND 0.50
BROMOMETHANE	µg/l	ND 1.0	ND 1.0	ND 0.50	ND 0.50	ND 0.50	ND 1.0	ND 1.0
CALCIUM	µg/l	52000	NT	53000	54000	ND 100	ND 500	ND 500
CARBON TETRACHLORIDE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
CHLORIDE	µg/l	190000	NT	190000	190000	ND 500	ND 200	ND 200
CHLOROBENZENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
CHLOROETHANE	µg/l	ND 1.0	ND 1.0	ND 0.50	ND 0.50	ND 0.50	ND 1.0	ND 1.0
CHLOROFORM	µg/l	8.8	ND 0.50	13	12	ND 0.50	ND 0.50	ND 0.50
CHLOROMETHANE	µg/l	ND 1.0	ND 1.0	ND 0.50	ND 0.50	ND 0.50	ND 1.0	ND 1.0
cis-1,2-DICHLOROETHENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
cis-1,3-DICHLOROPROPENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
CUMENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
CYANIDE	µg/l	20	NT	ND 5.0	ND 5.0	ND 5.0	ND 10	NT
Di-isopropyl ether	µg/l	NT	NT	ND 3.0	ND 3.0	ND 3.0	NT	NT
DIBROMOACETIC ACID	µg/l	0.37	NT	3.3	3.4	ND 1.0	ND 1.0	ND 1.0
DIBROMOCHLOROMETHANE	µg/l	4.2	ND 0.50	7.8	7.1	ND 0.50	ND 0.50	ND 0.50
DIBROMOMETHANE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
DICHLOROACETIC ACID	µg/l	0.57	NT	15	14	ND 1.0	ND 1.0	ND 1.0
DICHLORODIFLUOROMETHANE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT

Notes:

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NT - sample not tested for the given parameter
Project sample associated with field duplicate sample included for comparison

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	IDT Source	Rinseate Blank	SJSC Plant	SJSC Plant	Travel Blank	Travel Blank	Travel Blank
	Date	3/1/2010	2/2/2009	5/19/2008	5/19/2008	5/19/2008	12/15/2008	7/13/2009
	Sample Purpose	REG	RB	FD	REG	TB	TB	TB
Parameter	Units							
DISSOLVED ORGANIC CARBON	µg/l	4800	NT	7000	6800	ND 300	1700	ND 1000
E. COLI, TOTAL	MPN/100ml	ND 2.0	NT	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0
Ethyl tert-butyl ether	µg/l	NT	NT	ND 3.0	ND 3.0	ND 3.0	NT	NT
ETHYLBENZENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
ethylenediaminetetraacetic acid (EDTA)	µg/l	ND 100	NT	ND 100	ND 100	ND 100	ND 100	NT
FECAL COLIFORM	MPN/100ml	ND 2.0	NT	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0
FREON 113	µg/l	ND 2.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0	ND 5.0
HAA5, Total	µg/l	NT	NT	29	27	ND 5.0	ND 1.0	ND 1.0
HETEROTROPHIC PLATE COUNT (HPC)	CFU/ml	3100 T D	NT	6.0	2.0	NT	ND 1.0	ND 1.0
HEXACHLOROBUTADIENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
m,p-Xylenes	µg/l	ND 0.50 mp	ND 0.50 mp	ND 1.0	ND 1.0	ND 1.0	ND 0.50 mp	ND 0.50 mp
MAGNESIUM	µg/l	29000	NT	29000	30000	ND 100	ND 500	ND 500
METHYL tert-BUTYL ETHER	µg/l	ND 0.50	NT	ND 3.0	ND 3.0	ND 3.0	NT	NT
METHYLENE CHLORIDE	µg/l	ND 20	ND 5.0	ND 0.50	ND 0.50	1.3	ND 5.0	ND 5.0
MONOBROMOACETIC ACID	µg/l	ND 0.99	NT	ND 1.0	ND 1.0	ND 1.0	ND 1.0	ND 1.0
n-BUTYLBENZENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
N-Nitrosodimethylamine	µg/l	0.32	NT	0.12	0.11	ND 0.0020	ND 0.0020	ND 0.0020
n-PROPYLBENZENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
NAPHTHALENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
NITRATE	µg/l	7700	NT	9300 O-09	9600 O-09	ND 110 O-09	ND 50	ND 50
Nitrilotriacetic acid (NTA)	µg/l	NT	NT	ND 100	ND 100	ND 100	NT	NT
NITRITE	µg/l	650	NT	ND 150 O-09	ND 150 O-09	ND 150 O-09	ND 50	ND 50
o-CHLOROTOLUENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
ORTHOPHOSPHATE as P	µg/l	NT	NT	175	168 T	76	NT	NT
p-CHLOROTOLUENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
p-CYMENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
Perchlorate	µg/l	NT	NT	ND 4.0	ND 4.0	ND 4.0	NT	NT
Perfluorobutyric acid (PFBA)	µg/l	0.012	NT	ND 0.050	ND 0.050	ND 0.050	ND 0.020	ND 0.020

Notes:

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NT - sample not tested for the given parameter
Project sample associated with field duplicate sample included for comparison

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	IDT Source	Rinseate Blank	SJSC Plant	SJSC Plant	Travel Blank	Travel Blank	Travel Blank
	Date	3/1/2010	2/2/2009	5/19/2008	5/19/2008	5/19/2008	12/15/2008	7/13/2009
	Sample Purpose	REG	RB	FD	REG	TB	TB	TB
Parameter	Units							
Perfluorooctanesulfonic acid (PFOS)	µg/l	0.051	NT	ND 0.050	ND 0.050	ND 0.050	ND 0.0050	ND 0.0050
Perfluorooctanoic acid (PFOA)	µg/l	0.070	NT	0.029	ND 0.020 D	ND 0.020	ND 0.0050	ND 0.0050
Phosphate	µg/l	210	NT	NT	NT	NT	ND 30	ND 30
POTASSIUM	µg/l	12000	NT	15000	16000	ND 100	ND 500	ND 500
sec-BUTYLBENZENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
sec-DICHLOROPROPANE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
SODIUM	µg/l	120000	NT	130000	130000	ND 500	ND 500	530
STYRENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
SULFATE	µg/l	100000	NT	96000	94000	ND 500	ND 500	ND 500
SURFACTANTS (MBAS)	µg/l	ND 200	NT	180	210	ND 100	ND 200	NT
Terbuthylazine	µg/l	ND 0.10	NT	ND 0.10 Q5	ND 0.10 Q5	ND 0.10	ND 0.10	NT
Tert-amyl methyl ether	µg/l	NT	NT	ND 3.0	ND 3.0	ND 3.0	NT	NT
tert-BUTYLBENZENE	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT
TETRACHLOROETHENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
TOLUENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
TOTAL COLIFORMS	MPN/100ml	ND 2.0	NT	ND 2.0	ND 2.0	ND 2.0	ND 2.0	ND 2.0
Total Dissolved Solids	µg/l	740000	NT	680000	690000	ND 10000	ND 10000	ND 10000
TOTAL ORGANIC CARBON	µg/l	6200	NT	6900	6900	ND 300	ND 500	ND 500
trans-1,2-DICHLOROETHENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
trans-1,3-DICHLOROPROPENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
TRICHLOROACETIC ACID	µg/l	ND 0.99	NT	11	9.7	ND 1.0	ND 1.0	ND 1.0
TRICHLOROETHENE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
TRICHLOROFLUOROMETHANE	µg/l	ND 1.0	ND 1.0	ND 5.0	ND 5.0	ND 5.0	ND 1.0	ND 1.0
VINYL CHLORIDE	µg/l	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50	ND 0.50
Xylenes (Total)	µg/l	NT	NT	ND 0.50	ND 0.50	ND 0.50	NT	NT

Notes:

ND - denotes result was below the detection limit

NT - sample not tested for the given parameter

Project sample associated with field duplicate sample included for comparison

Locus TECHNOLOGIES

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	Travel Blank
	Date	3/1/2010
	Sample Purpose	TB
Parameter	Units	
1,1,1,2-TETRACHLOROETHANE	µg/l	NT
1,1,1-TRICHLOROETHANE	µg/l	ND 0.50
1,1,2,2-TETRACHLOROETHANE	µg/l	ND 0.50
1,1,2-TRICHLOROETHANE	µg/l	ND 0.50
1,1-DICHLOROETHANE	µg/l	ND 0.50
1,1-DICHLOROETHENE	µg/l	ND 0.50
1,1-DICHLOROPROPENE	µg/l	NT
1,2,3-TRICHLOROBENZENE	µg/l	NT
1,2,3-TRICHLOROPROPANE	µg/l	NT
1,2,4-TRICHLOROBENZENE	µg/l	NT
1,2-DICHLOROBENZENE	µg/l	ND 0.50
1,2-DICHLOROETHANE	µg/l	ND 0.50
1,2-DICHLOROPROPANE	µg/l	ND 0.50
1,2-DIMETHYLBENZENE	µg/l	ND 0.50
1,3 Dichloropropene (Total)	µg/l	NT
1,3-DICHLOROBENZENE	µg/l	ND 0.50
1,3-DICHLOROPROPANE	µg/l	NT
1,4-DICHLOROBENZENE	µg/l	ND 0.50
2-BUTANONE	µg/l	NT
2-CHLOROETHYL VINYL ETHER	µg/l	NT
2-HEXANONE	µg/l	NT
4-METHYL-2-PENTANONE	µg/l	NT
ACETIC ACID, CHLORO-	µg/l	ND 2.0
Alkalinity Total, as CaCO3	µg/l	ND 1000
Alkalinity, Bicarbonate as CaCO3	µg/l	ND 1000
Alkalinity, Bicarbonate as HCO3	mg/l	NT
Alkalinity, Carbonate as CaCO3	µg/l	ND 1000
Alkalinity, Hydroxide as CaCO3	µg/l	ND 1000

Notes:

ND - denotes result was below the detection limit
NT - sample not tested for the given parameter
Project sample associated with field duplicate sample included for comparison

Locus TECHNOLOGIES

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	Travel Blank
	Date	3/1/2010
	Sample Purpose	TB
Parameter	Units	
BENZENE, 1,2,4-TRIMETHYL	µg/l	NT
BENZENE, 1,3,5-TRIMETHYL-	µg/l	NT
BENZENE	µg/l	ND 0.50
BORON	µg/l	ND 100
BROMIDE	µg/l	ND 50
BROMOBENZENE	µg/l	NT
BROMOCHLOROACETIC ACID	µg/l	ND 1.0
BROMOCHLOROMETHANE	µg/l	NT
BROMODICHLOROMETHANE	µg/l	ND 0.50
BROMOFORM	µg/l	ND 0.50
BROMOMETHANE	µg/l	ND 1.0
CALCIUM	µg/l	ND 500
CARBON TETRACHLORIDE	µg/l	ND 0.50
CHLORIDE	µg/l	ND 200
CHLOROBENZENE	µg/l	ND 0.50
CHLOROETHANE	µg/l	ND 1.0
CHLOROFORM	µg/l	ND 0.50
CHLOROMETHANE	µg/l	ND 1.0
cis-1,2-DICHLOROETHENE	µg/l	ND 0.50
cis-1,3-DICHLOROPROPENE	µg/l	ND 0.50
CUMENE	µg/l	NT
CYANIDE	µg/l	NT
Di-isopropyl ether	µg/l	NT
DIBROMOACETIC ACID	µg/l	ND 1.0
DIBROMOCHLOROMETHANE	µg/l	ND 0.50
DIBROMOMETHANE	µg/l	NT
DICHLOROACETIC ACID	µg/l	ND 1.0
DICHLORODIFLUOROMETHANE	µg/l	NT

Notes:

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Project sample associated with field duplicate sample included for comparison

Locus TECHNOLOGIES

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	Travel Blank
	Date	3/1/2010
	Sample Purpose	TB
Parameter	Units	
DISSOLVED ORGANIC CARBON	µg/l	ND 1000
E. COLI, TOTAL	MPN/100ml	ND 2.0
Ethyl tert-butyl ether	µg/l	NT
ETHYLBENZENE	µg/l	ND 0.50
ethylenediaminetetraacetic acid (EDTA)	µg/l	NT
FECAL COLIFORM	MPN/100ml	ND 2.0
FREON 113	µg/l	ND 2.0
HAA5, Total	µg/l	NT
HETEROTROPHIC PLATE COUNT (HPC)	CFU/ml	980
HEXACHLOROBUTADIENE	µg/l	NT
m,p-Xylenes	µg/l	ND 0.50 mp
MAGNESIUM	µg/l	ND 500
METHYL tert-BUTYL ETHER	µg/l	ND 0.50
METHYLENE CHLORIDE	µg/l	ND 20
MONOBROMOACETIC ACID	µg/l	ND 1.0
n-BUTYLBENZENE	µg/l	NT
N-Nitrosodimethylamine	µg/l	ND 0.0020
n-PROPYLBENZENE	µg/l	NT
NAPHTHALENE	µg/l	NT
NITRATE	µg/l	ND 50
Nitrilotriacetic acid (NTA)	µg/l	NT
NITRITE	µg/l	ND 50
o-CHLOROTOLUENE	µg/l	NT
ORTHOPHOSPHATE as P	µg/l	NT
p-CHLOROTOLUENE	µg/l	NT
p-CYMENE	µg/l	NT
Perchlorate	µg/l	NT
Perfluorobutyric acid (PFBA)	µg/l	ND 0.010

Notes:

ND - denotes result was below the detection limit

NT - sample not tested for the given parameter

Project sample associated with field duplicate sample included for comparison

TABLE III-4-3
QA/QC ANALYTICAL DATA
IDT PILOT STUDY
6024 SILVER CREEK VALLEY ROAD, SAN JOSE, CA

	Location	Travel Blank
	Date	3/1/2010
	Sample Purpose	TB
Parameter	Units	
Perfluorooctanesulfonic acid (PFOS)	µg/l	ND 0.0050
Perfluorooctanoic acid (PFOA)	µg/l	ND 0.0050
Phosphate	µg/l	ND 30
POTASSIUM	µg/l	ND 500
sec-BUTYLBENZENE	µg/l	NT
sec-DICHLOROPROPANE	µg/l	NT
SODIUM	µg/l	ND 500
STYRENE	µg/l	NT
SULFATE	µg/l	ND 500
SURFACTANTS (MBAS)	µg/l	NT
Terbuthylazine	µg/l	NT
Tert-amyl methyl ether	µg/l	NT
tert-BUTYLBENZENE	µg/l	NT
TETRACHLOROETHENE	µg/l	ND 0.50
TOLUENE	µg/l	ND 0.50
TOTAL COLIFORMS	MPN/100ml	ND 2.0
Total Dissolved Solids	µg/l	ND 10000
TOTAL ORGANIC CARBON	µg/l	ND 500
trans-1,2-DICHLOROETHENE	µg/l	ND 0.50
trans-1,3-DICHLOROPROPENE	µg/l	ND 0.50
TRICHLOROACETIC ACID	µg/l	ND 1.0
TRICHLOROETHENE	µg/l	ND 0.50
TRICHLOROFLUOROMETHANE	µg/l	ND 1.0
VINYL CHLORIDE	µg/l	ND 0.50
Xylenes (Total)	µg/l	NT

Notes:

ND - denotes result was below the detection limit

NT - sample not tested for the given parameter

Project sample associated with field duplicate sample included for comparison

TABLE III-4-4
MANN-KENDALL TREND ANALYSIS
PILOT STUDY
RECYCLED WATER STUDY

Parameter Name	Location ID	No Of Records	No Of Positive Differences	No Of Negative Differences	No Of Ties	No Of NonDetects	Mann Kendall Stat (S)	Probability	Trend
Alkalinity Total, as CaCO3	IDT Source	11	25	8	22	0	17	0.218	None
	L10-COMP	8	16	11	1	0	5	0.634	None
	L5-COMP	8	17	10	1	0	7	0.474	None
	MW-1	8	14	13	1	0	1	1	None
	MW-2	8	6	16	6	0	-10	0.276	None
	MW-3	8	19	9	0	0	10	0.276	None
	MW-4	8	8	19	1	0	-11	0.228	None
Alkalinity, Bicarbonate as CaCO3	IDT Source	11	25	8	22	0	17	0.218	None
	L10-COMP	8	16	10	2	0	6	0.548	None
	L5-COMP	8	17	9	2	0	8	0.398	None
	MW-1	8	14	13	1	0	1	1	None
	MW-2	8	6	16	6	0	-10	0.276	None
	MW-3	8	19	9	0	0	10	0.276	None
	MW-4	8	8	19	1	0	-11	0.228	None
Boron	IDT Source	11	15	34	6	0	-19	0.164	None
	L10-COMP	8	7	20	1	0	-13	0.142	None
	L5-COMP	8	7	20	1	0	-13	0.142	None
	MW-1	9	13	18	5	0	-5	0.686	None
	MW-2	9	9	21	6	0	-12	0.26	None
	MW-3	9	10	19	7	0	-9	0.418	None
	MW-4	9	11	21	4	0	-10	0.358	None
Bromide	IDT Source	11	28	21	6	0	7	0.648	None
	L10-COMP	8	26	2	0	0	24	0.002	Up
	L5-COMP	7	7	13	1	0	-6	0.472	None
	MW-1	9	22	13	1	2	9	0.418	None
	MW-2	9	23	12	1	2	11	0.31	None
	MW-3	9	24	11	1	2	13	0.22	None
	MW-4	9	22	13	1	2	9	0.418	None
Bromochloroacetic acid	IDT Source	11	16	34	5	5	-18	0.191	None
	L10-COMP	8	0	0	0	8	0	1	None - All Ties
	L5-COMP	8	0	0	0	8	0	1	None - All Ties
	MW-1	9	2	6	28	9	-4	0.762	None
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	2	12	22	9	-10	0.358	None
	MW-4	9	0	8	28	9	-8	0.476	None
Bromodichloromethane	IDT Source	11	31	20	4	0	11	0.446	None
	L10-COMP	8	5	2	21	7	3	0.812	None
	L5-COMP	8	4	9	15	7	-5	0.634	None
	MW-1	9	0	0	0	9	0	1	None - All Ties
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	0	0	0	9	0	1	None - All Ties
	MW-4	9	0	0	0	9	0	1	None - All Ties
Bromoform	IDT Source	11	20	32	3	0	-12	0.402	None
	L10-COMP	8	0	0	0	8	0	1	None - All Ties
	L5-COMP	8	0	7	21	8	-7	0.474	None
	MW-1	9	0	0	0	9	0	1	None - All Ties
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	0	0	0	9	0	1	None - All Ties
	MW-4	9	0	0	0	9	0	1	None - All Ties
Calcium	IDT Source	11	21	30	4	0	-9	0.542	None
	L10-COMP	8	4	20	4	0	-16	0.062	None
	L5-COMP	8	3	22	3	0	-19	0.022	Down
	MW-1	9	12	24	0	0	-12	0.26	None
	MW-2	9	9	26	1	0	-17	0.098	None
	MW-3	9	18	17	1	0	1	1	None
	MW-4	9	8	18	10	0	-10	0.358	None
Carbon Tetrachloride	IDT Source	11	0	0	0	11	0	1	None - All Ties
	L10-COMP	8	0	0	0	8	0	1	None - All Ties
	L5-COMP	8	0	7	21	8	-7	0.474	None
	MW-1	9	0	0	0	9	0	1	None - All Ties
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	0	0	0	9	0	1	None - All Ties
	MW-4	9	0	0	0	9	0	1	None - All Ties
Chloride	IDT Source	11	9	34	12	0	-25	0.06	None
	L10-COMP	8	24	3	1	0	21	0.01	Up
	L5-COMP	8	25	3	0	0	22	0.006	Up
	MW-1	9	17	15	4	0	2	0.92	None
	MW-2	9	18	16	2	0	2	0.92	None
	MW-3	9	29	6	1	0	23	0.018	Up
	MW-4	9	27	8	1	0	19	0.06	None
Chloroacetic acid	IDT Source	11	7	3	45	10	4	0.821	None
	L10-COMP	8	0	13	15	6	-13	0.142	None
	L5-COMP	8	12	1	15	6	11	0.228	None
	MW-1	9	0	0	0	9	0	1	None - All Ties
	MW-2	9	0	8	28	8	-8	0.476	None
	MW-3	9	0	0	0	9	0	1	None - All Ties
	MW-4	9	0	0	0	9	0	1	None - All Ties
Chloroform	IDT Source	11	36	16	3	0	20	0.142	None
	L10-COMP	8	5	2	21	7	3	0.812	None
	L5-COMP	8	4	9	15	7	-5	0.634	None
	MW-1	9	6	2	28	9	4	0.762	None
	MW-2	9	6	2	28	9	4	0.762	None
	MW-3	9	6	2	28	9	4	0.762	None
	MW-4	9	6	2	28	9	4	0.762	None
Cyanide	IDT Source	9	14	9	13	5	5	0.686	None
Dibromoacetic acid	IDT Source	11	3	36	16	7	-33	0.01	Down
	L10-COMP	8	5	2	21	7	3	0.812	None
	L5-COMP	8	2	5	21	7	-3	0.812	None
	MW-1	9	2	6	28	9	-4	0.762	None
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	2	12	22	9	-10	0.358	None
	MW-4	9	0	8	28	9	-8	0.476	None

Notes:

Non detects treated at the reporting limit.
5% Significance level used.

TABLE III-4-4
MANN-KENDALL TREND ANALYSIS
PILOT STUDY
RECYCLED WATER STUDY

Parameter Name	Location ID	No Of Records	No Of Positive Differences	No Of Negative Differences	No Of Ties	No Of NonDetects	Mann Kendall Stat (S)	Probability	Trend
Dibromochloromethane	IDT Source	11	27	24	4	0	3	0.88	None
	L10-COMP	8	5	2	21	7	3	0.812	None
	L5-COMP	8	4	9	15	7	-5	0.634	None
	MW-1	9	0	0	0	9	0	1	None - All Ties
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	0	0	0	9	0	1	None - All Ties
	MW-4	9	0	0	0	9	0	1	None - All Ties
Dichloroacetic acid	IDT Source	11	16	36	3	1	-20	0.142	None
	L10-COMP	8	3	10	15	6	-7	0.474	None
	L5-COMP	8	3	10	15	6	-7	0.474	None
	MW-1	9	2	6	28	9	-4	0.762	None
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	2	12	22	9	-10	0.358	None
	MW-4	9	0	8	28	9	-8	0.476	None
Dissolved Organic Carbon	IDT Source	11	11	41	3	0	-30	0.021	Down
	L10-COMP	8	11	17	0	0	-6	0.548	None
	L5-COMP	8	9	18	1	0	-9	0.336	None
	MW-1	9	0	8	28	8	-8	0.476	None
	MW-2	9	12	3	21	7	9	0.418	None
	MW-3	9	8	0	28	8	8	0.476	None
	MW-4	9	0	8	28	8	-8	0.476	None
E. Coli, total	IDT Source	11	8	10	37	9	-2	0.94	None
	L10-COMP	8	0	0	0	8	0	1	None - All Ties
	L5-COMP	8	0	0	0	8	0	1	None - All Ties
	MW-1	9	0	0	0	9	0	1	None - All Ties
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	0	0	0	9	0	1	None - All Ties
	MW-4	9	0	0	0	9	0	1	None - All Ties
Ethylenediaminetetraacetic acid (edta)	IDT Source	9	0	0	0	9	0	1	None - All Ties
Fecal coliform	IDT Source	11	12	25	18	7	-13	0.358	None
	L10-COMP	8	0	0	0	8	0	1	None - All Ties
	L5-COMP	8	5	2	21	7	3	0.812	None
	MW-1	9	0	0	0	9	0	1	None - All Ties
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	0	0	0	9	0	1	None - All Ties
	MW-4	9	0	0	0	9	0	1	None - All Ties
Heterotrophic plate count (HPC)	IDT Source	11	28	21	6	0	7	0.648	None
	L10-COMP	8	8	19	1	1	-11	0.228	None
	L5-COMP	8	6	21	1	0	-15	0.086	None
	MW-1	9	18	18	0	0	0	1	None
	MW-2	9	23	13	0	0	10	0.358	None
	MW-3	9	18	18	0	0	0	1	None
	MW-4	9	8	27	1	0	-19	0.06	None
m,p-Xylenes	IDT Source	11	0	0	0	11	0	1	None - All Ties
	L10-COMP	8	0	0	0	8	0	1	None - All Ties
	L5-COMP	8	0	7	21	8	-7	0.474	None
	MW-1	8	0	0	0	8	0	1	None - All Ties
	MW-2	8	0	0	0	8	0	1	None - All Ties
	MW-3	8	0	0	0	8	0	1	None - All Ties
	MW-4	8	0	0	0	8	0	1	None - All Ties
Magnesium	IDT Source	11	22	27	6	0	-5	0.762	None
	L10-COMP	8	7	17	4	0	-10	0.276	None
	L5-COMP	8	6	22	0	0	-16	0.062	None
	MW-1	9	12	23	1	0	-11	0.31	None
	MW-2	9	11	23	2	0	-12	0.26	None
	MW-3	9	14	21	1	0	-7	0.544	None
	MW-4	9	11	24	1	0	-13	0.22	None
Monobromoacetic acid	IDT Source	11	0	24	31	11	-24	0.073	None
	L10-COMP	8	0	0	0	8	0	1	None - All Ties
	L5-COMP	8	0	0	0	8	0	1	None - All Ties
	MW-1	9	2	6	28	9	-4	0.762	None
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	2	12	22	9	-10	0.358	None
	MW-4	9	0	8	28	9	-8	0.476	None
N-Nitrosodimethylamine	IDT Source	11	13	37	5	0	-24	0.073	None
	L10-COMP	8	3	24	1	2	-21	0.01	Down
	L5-COMP	8	0	13	15	6	-13	0.142	None
	MW-1	9	23	3	10	5	20	0.044	Up
	MW-2	9	15	0	21	7	15	0.15	None
	MW-3	9	0	0	0	9	0	1	None - All Ties
	MW-4	9	19	2	15	6	17	0.098	None
Nitrate as N	IDT Source	11	12	33	10	0	-21	0.12	None
	L10-COMP	8	24	4	0	0	20	0.014	Up
	L5-COMP	8	20	7	1	2	13	0.142	None
	MW-1	9	11	23	2	0	-12	0.26	None
	MW-2	9	4	31	1	0	-27	0.004	Down
	MW-3	9	22	14	0	0	8	0.476	None
	MW-4	9	9	26	1	0	-17	0.098	None
Nitrite as N	IDT Source	11	23	28	4	1	-5	0.762	None
	L10-COMP	8	2	5	21	8	-3	0.812	None
	L5-COMP	8	0	19	9	8	-19	0.022	Down
	MW-1	9	2	13	21	8	-11	0.31	None
	MW-2	9	0	8	28	9	-8	0.476	None
	MW-3	9	0	8	28	9	-8	0.476	None
	MW-4	9	0	8	28	9	-8	0.476	None
Perfluorobutyric acid (PFBA)	IDT Source	11	15	11	29	10	4	0.821	None
	L10-COMP	8	0	13	15	7	-13	0.142	None
	L5-COMP	8	3	22	3	4	-19	0.022	Down
	MW-1	9	0	15	21	9	-15	0.15	None
	MW-2	9	0	15	21	9	-15	0.15	None
	MW-3	9	0	15	21	9	-15	0.15	None
	MW-4	9	0	15	21	9	-15	0.15	None

Notes:

Non detects treated at the reporting limit.

5% Significance level used.

TABLE III-4-4
MANN-KENDALL TREND ANALYSIS
PILOT STUDY
RECYCLED WATER STUDY

Parameter Name	Location ID	No Of Records	No Of Positive Differences	No Of Negative Differences	No Of Ties	No Of NonDetects	Mann Kendall Stat (S)	Probability	Trend
Perfluorooctanesulfonic acid (PFOS)	IDT Source	11	29	22	4	0	7	0.648	None
	L10-COMP	8	5	2	21	7	3	0.812	None
	L5-COMP	8	6	1	21	7	5	0.634	None
	MW-1	9	5	10	21	8	-5	0.686	None
	MW-2	9	0	8	28	9	-8	0.476	None
	MW-3	9	0	8	28	9	-8	0.476	None
	MW-4	9	1	14	21	8	-13	0.22	None
Perfluorooctanoic acid (PFOA)	IDT Source	11	29	21	5	0	8	0.595	None
	L10-COMP	8	3	10	15	6	-7	0.474	None
	L5-COMP	8	7	15	6	4	-8	0.398	None
	MW-1	9	0	8	28	9	-8	0.476	None
	MW-2	9	5	16	15	7	-11	0.31	None
	MW-3	9	4	11	21	8	-7	0.544	None
	MW-4	9	5	10	21	8	-5	0.686	None
Phosphate, Total as P	IDT Source	11	21	31	3	0	-10	0.494	None
	L10-COMP	8	15	12	1	1	3	0.812	None
	L5-COMP	9	23	13	0	1	10	0.358	None
	MW-1	8	22	5	1	0	17	0.05	None
	MW-2	8	8	20	0	0	-12	0.178	None
	MW-3	8	12	16	0	0	-4	0.72	None
	MW-4	8	6	19	3	3	-13	0.142	None
Potassium	IDT Source	11	11	36	8	0	-25	0.06	None
	L10-COMP	8	3	24	1	0	-21	0.01	Down
	L5-COMP	8	8	19	1	0	-11	0.228	None
	MW-1	9	16	20	0	0	-4	0.762	None
	MW-2	9	15	21	0	0	-6	0.612	None
	MW-3	9	11	15	10	5	-4	0.762	None
	MW-4	9	1	14	21	7	-13	0.22	None
Sodium	IDT Source	11	18	29	8	0	-11	0.446	None
	L10-COMP	8	6	21	1	0	-15	0.086	None
	L5-COMP	8	11	16	1	0	-5	0.634	None
	MW-1	9	10	23	3	0	-13	0.22	None
	MW-2	9	11	22	3	0	-11	0.31	None
	MW-3	9	15	20	1	0	-5	0.686	None
	MW-4	9	9	24	3	0	-15	0.15	None
Sulfate	IDT Source	11	30	18	7	0	12	0.402	None
	L10-COMP	8	0	28	0	0	-28	0	Down
	L5-COMP	8	3	25	0	0	-22	0.006	Down
	MW-1	9	14	22	0	0	-8	0.476	None
	MW-2	9	11	23	2	0	-12	0.26	None
	MW-3	9	22	14	0	0	8	0.476	None
	MW-4	9	14	22	0	0	-8	0.476	None
Surfactants (MBAS)	IDT Source	9	0	0	0	9	0	1	None - All Ties
Terbuthylazine	IDT Source	9	0	8	28	8	-8	0.476	None
Total Coliforms	IDT Source	11	18	26	11	3	-8	0.595	None
	L10-COMP	8	10	12	6	4	-2	0.904	None
	L5-COMP	8	14	10	4	3	4	0.72	None
	MW-1	9	14	15	7	4	-1	1	None
	MW-2	9	12	17	7	4	-5	0.686	None
	MW-3	9	15	10	11	5	5	0.686	None
	MW-4	9	10	15	11	5	-5	0.686	None
Total Dissolved Solids	IDT Source	11	21	29	5	0	-8	0.595	None
	L10-COMP	8	3	24	1	0	-21	0.01	Down
	L5-COMP	8	5	23	0	0	-18	0.032	Down
	MW-1	9	16	18	2	0	-2	0.92	None
	MW-2	9	14	20	2	0	-6	0.612	None
	MW-3	9	23	12	1	0	11	0.31	None
	MW-4	9	10	23	3	0	-13	0.22	None
Total Organic Carbon	IDT Source	11	23	28	4	0	-5	0.762	None
	L10-COMP	8	9	18	1	0	-9	0.336	None
	L5-COMP	8	11	17	0	0	-6	0.548	None
	MW-1	9	19	16	1	2	3	0.84	None
	MW-2	9	15	14	7	4	1	1	None
	MW-3	9	14	19	3	3	-5	0.686	None
	MW-4	9	8	27	1	2	-19	0.06	None
Trichloroacetic acid	IDT Source	11	18	30	7	6	-12	0.402	None
	L10-COMP	8	0	0	0	8	0	1	None - All Ties
	L5-COMP	8	0	0	0	8	0	1	None - All Ties
	MW-1	9	2	6	28	9	-4	0.762	None
	MW-2	9	0	0	0	9	0	1	None - All Ties
	MW-3	9	2	12	22	9	-10	0.358	None
	MW-4	9	0	8	28	9	-8	0.476	None
Conductivity	IDT Source	7	9	12	0	0	-3	0.772	None
	L10-COMP	8	13	15	0	0	-2	0.904	None
	L5-COMP	8	9	19	0	0	-10	0.276	None
	MW-1	8	12	16	0	0	-4	0.72	None
	MW-2	8	17	11	0	0	6	0.548	None
	MW-3	8	19	9	0	0	10	0.276	None
	MW-4	8	0	28	0	0	-28	0	Down
Dissolved Oxygen	IDT Source	7	11	10	0	0	1	1	None
	L10-COMP	8	16	12	0	0	4	0.72	None
	L5-COMP	8	16	12	0	0	4	0.72	None
	MW-1	8	9	18	1	0	-9	0.336	None
	MW-2	8	22	6	0	0	16	0.062	None
	MW-3	8	18	10	0	0	8	0.398	None
	MW-4	8	19	8	1	0	11	0.228	None
Oxidation Reduction Potential	IDT Source	7	11	10	0	0	1	1	None
	L10-COMP	8	20	8	0	0	12	0.178	None
	L5-COMP	8	19	9	0	0	10	0.276	None
	MW-1	8	16	12	0	0	4	0.72	None
	MW-2	8	10	18	0	0	-8	0.398	None
	MW-3	8	2	25	1	0	-23	0.002	Down

Notes:

Non detects treated at the reporting limit.
5% Significance level used.

TABLE III-4-4
MANN-KENDALL TREND ANALYSIS
PILOT STUDY
RECYCLED WATER STUDY

Parameter Name	Location ID	No Of Records	No Of Positive Differences	No Of Negative Differences	No Of Ties	No Of NonDetects	Mann Kendall Stat (S)	Probability	Trend
Oxidation Reduction Potential	MW-4	8	18	9	1	0	9	0.336	None
pH	IDT Source	7	14	7	0	0	7	0.382	None
	L10-COMP	8	15	13	0	0	2	0.904	None
	L5-COMP	8	22	5	1	0	17	0.05	None
	MW-1	8	10	18	0	0	-8	0.398	None
	MW-2	8	15	12	1	0	3	0.812	None
	MW-3	8	6	22	0	0	-16	0.062	None
	MW-4	8	10	18	0	0	-8	0.398	None
Residual Chlorine	IDT Source	7	10	11	0	0	-1	1	None
	L10-COMP	8	19	9	0	0	10	0.276	None
	L5-COMP	8	14	14	0	0	0	1	None
	MW-1	8	2	26	0	0	-24	0.002	Down
	MW-2	8	0	18	10	0	-18	0.032	Down
	MW-3	8	20	8	0	0	12	0.178	None
	MW-4	8	7	21	0	0	-14	0.108	None
Sodium Adorption Ratio	IDT Source	9	16	20	0	0	-4	0.762	None
	L10-COMP	8	8	20	0	0	-12	0.178	None
	L5-COMP	8	17	11	0	0	6	0.548	None
	MW-1	9	15	21	0	0	-6	0.612	None
	MW-2	9	15	21	0	0	-6	0.612	None
	MW-3	9	16	20	0	0	-4	0.762	None
	MW-4	9	10	26	0	0	-16	0.12	None

Notes:

Non detects treated at the reporting limit.

5% Significance level used.

Volume IV
Evaluation of Potential Impacts

Recycled Water Irrigation and Groundwater Study
Santa Clara and Llagas Groundwater Subbasins
Santa Clara County, California

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TABLE OF CONTENTS

LIST OF FIGURES .... **IV-iii**
LIST OF TABLES .... **IV-iv**
LIST OF APPENDICES .... **IV-v**
LIST OF ACRONYMS AND ABBREVIATIONS .... **IV-vi**
EXECUTIVE SUMMARY **IV-ES-1**

1. INTRODUCTION **1**
- 1.1. Purpose 1
- 1.2. Approach 2

2. SOIL AQUIFER TREATMENT CAPACITY **4**
- 2.1. Methodology 4
  - 2.1.1. DRASTIC 4
  - 2.1.2. Evaluation Assumptions 5
  - 2.1.3. GIS Tool 6
- 2.2. Evaluation Criteria 6
  - 2.2.1. Depth to Water 6
    - 2.2.1.1. Derivation of Ratings 7
    - 2.2.1.2. Data and Calculation 9
  - 2.2.2. Soil Media 9
    - 2.2.2.1. Derivation of Ratings 10
    - 2.2.2.2. Data and Calculations 11
  - 2.2.3. Impact of the Vadose Zone Media 12
    - 2.2.3.1. Derivation of Ratings 12
    - 2.2.3.2. Data and Calculations 13
- 2.3. Omitted Evaluation Criteria 14
  - 2.3.1. Net Recharge 14
  - 2.3.2. Topography 14
  - 2.3.3. Aquifer Media and Hydraulic Conductivity of Aquifer 15
- 2.4. Weighting and Rating System Flowchart 16
- 2.5. Calibration of Input Weightings 17
- 2.6. Soil Aquifer Treatment Capacity Zones 19

3. POTENTIAL TO DEGRADE GROUNDWATER QUALITY **21**
- 3.1. Methodology 21
- 3.2. Evaluation Criteria 22
  - 3.2.1. Soil Aquifer Treatment Capacity 22
  - 3.2.2. Recycled Water Quality Rating 23

3.2.2.1. Current Groundwater Quality 23
3.2.2.2. Recycled Water Quality Data 26
3.2.2.3. Threat Values 27
3.2.2.4. Calculation Method 28
3.3. Assumptions 31
3.4. Zones 31
3.5. Limitations 33

4. DISCUSSION 34
4.1. Soil Aquifer Treatment Capacity 34
4.2. Groundwater Degradation Potential 35
4.3. Comparison to the Groundwater Vulnerability Study 36

5. CONCLUSION 38

REFERENCES 39

FIGURES
TABLES
APPENDICES

LIST OF FIGURES

FIGURE NO.	TITLE
IV-2-1	Derivation of Depth to Water Ratings
IV-2-2	Depth to Water Ratings, Santa Clara Groundwater Subbasin
IV-2-3	Depth to Water Ratings, Llagas Groundwater Subbasin
IV-2-4	Soil Media Ratings, Santa Clara Groundwater Subbasin
IV-2-5	Soil Media Ratings, Llagas Groundwater Subbasin
IV-2-6	Impact of Vadose Zone Media Ratings, Santa Clara Groundwater Subbasin
IV-2-7	Impact of Vadose Zone Media Ratings, Llagas Groundwater Subbasin
IV-2-8	Baseline Graph, Soil Media: Silt, Vadose Zone Media: Silt
IV-2-9	Calibration Graph 1, Soil Media: Clay, Vadose Zone Media: Silt
IV-2-10	Calibration Graph 2, Soil Media: Silt, Vadose Zone Media: Clay
IV-2-11	Soil Aquifer Treatment Capacity, Santa Clara Groundwater Subbasin
IV-2-12	Soil Aquifer Treatment Capacity, Llagas Groundwater Subbasin
IV-3-1	Areas of Potential Recycled Water Application, Santa Clara Groundwater Subbasin
IV-3-2	Areas of Potential Recycled Water Application, Llagas Groundwater Subbasin
IV-3-3	Groundwater Degradation Potential, Santa Clara Groundwater Subbasin
IV-3-4	Groundwater Degradation Potential, Llagas Groundwater Subbasin
IV-3-5	Subindex Exponent Derivation

LIST OF TABLES

TABLE NO.	TITLE
IV-2-1	Derivation of Ratings for DRASTIC Depth to Water Input
IV-2-2	Derivation of Ratings for Soil Media and Impact of the Vadose Zone Inputs
IV-2-3	Vertical Hydraulic Conductivities for Different Soil Types
IV-2-4	Calculation for Calibration of Input Weightings
IV-3-1	Water Quality Objective and Assimilative Capacity
IV-3-2	Summary of Recycled Water and Baseline Groundwater Data
IV-3-3	Recycled Water Quality Rating Calculation

LIST OF APPENDICES

APPENDIX NO.	TITLE
IV-A	Reclaimed Water Chemistry, Summary Statistics

LIST OF ACRONYMS AND ABBREVIATIONS

ACRONYM	DESCRIPTION
GIS	geographic information system
IDT	Integrated Device Technology
Locus	Locus Technologies
mg/L	milligrams per liter
PARWQCP	Palo Alto Regional Water Quality Control Plant
PFOA	perfluoro octanoic acid
PFOS	perfluoro octanesulfonate
SAT	soil aquifer treatment
SCRWA	South County Regional Wastewater Authority
SCVWD	Santa Clara Valley Water District
SJ/SC WPCP	San Jose/Santa Clara Water Pollution Control Plant
SWPCP	Sunnyvale Water Pollution Control Plant

EXECUTIVE SUMMARY

Volume IV of this report assesses the soil aquifer treatment (SAT) capacity and groundwater degradation potential from expanded use of recycled water in the Santa Clara and Llagas Groundwater Subbasins. The goal of Volume IV is to geographically rate the SAT capacity and groundwater degradation potential throughout the study area. The evaluation relies on findings from the bench test and pilot study to calibrate the evaluation specific to the study area. To assess a rating in a geographical manner, the study utilizes AutoCAD Map 3D software to analyze multiple layers of geographic information system (GIS) data.

Soil Aquifer Treatment Capacity

SAT capacity is defined as the ability of the soil and aquifer to naturally treat contaminants. For this study, the focus is contaminants found in recycled water. The approach to delineating SAT capacity in the study area utilizes the hydrogeological characteristics of the given area including the depth to groundwater ("D"), the type of shallow soil media ("S") and the type of vadose zone media ("I"). The methodology for determining SAT capacity is an adaptation of EPA's DRASTIC system created for evaluating the relative groundwater pollution potential using hydrogeologic settings (USEPA, 1987). SAT capacity is determined by a weighted average of the rating of each input ("D", "S", and "I").

Depth to groundwater ("D") is the physical distance the water travels from the surface to reach the groundwater in the target aquifer. The target aquifer of concern is the principal aquifer which is the confined aquifer where a confining layer exists and the shallowest aquifer for unconfined areas. The rating for the depth to groundwater is calibrated on depth-specific results from the pilot study. The majority of the depth to water in the Santa Clara Subbasin in the confined areas was over 100 feet bgs. In the unconfined areas for the Santa Clara Subbasin, depth to groundwater ranged between 0 and 100 feet. Very few areas were below five feet bgs. In the Llagas Subbasin, the majority of the depth to groundwater in the confined area was more than 100 ft bgs. In the unconfined portions of the Llagas Subbasin, depth to groundwater ranged from 0 to 100 feet bgs. The weighting of the depth groundwater relative to the other input parameters is 49%. The weighting is calibrated from the soil attenuation model which examined the relative importance between each input.

Soil media (“S”) refers to the first several feet of soil below the ground surface. This is taken to be approximately six feet or less. The soil in this depth range is generally characterized by a high amount of organic matter. Major attenuative processes that occur in the soil media include biodegradation, filtration, volatilization, and sorption. Rating for the soil media is calibrated on results from the bench test which examined constituent removal from a range of soil cores with different grain size distributions. The majority of the Santa Clara Subbasin has a soil media classified as sandy loam or clay loam. The soil media in the northern section of the Santa Clara Subbasin is dominated by clay. For the Llagas Subbasin the major soil media is sandy loam followed by clay loam and silty loam. The weighting of the soil media relative to the other input parameters is 25%. The weighting is calibrated from the soil attenuation model which examined the relative importance between each input.

Impact of vadose zone media (“I”) refers to the depth above the water table in the unsaturated or partially saturated zone. The vadose zone is significant because it provides attenuation through biodegradation, filtration, volatilization, dispersion, and chemical reaction. Within the study area, the vadose zone media can be variable over depth. For unconfined areas, the representative vadose zone media for each area is determined by using the net hydraulic conductivity for the vadose zone soil profile. For areas with confined aquifers, the layer that controls the attenuation processes is the confining layer. Therefore, a value for the confining layer is assigned to confined areas. Rating for the vadose zone media is calibrated on results from the bench test which examined constituent removal from a range of soil cores with different grain size distributions. The vadose zone media in the Santa Clara and Llagas Subbasins in the confined area is the confining layer. The dominant vadose zone media in the Santa Clara Subbasin in the unconfined area is the clay. For the Llagas Subbasin, the dominant vadose zone media in the unconfined area is clay followed by silt. The weighting of the soil media relative to the other input parameters is 26%. The weighting is calibrated from the soil attenuation model which examined the relative importance between each input.

Soil Aquifer Treatment (SAT) capacity maps are found in Figure IV-2-11 and IV-2-12 for the Santa Clara and Llagas Subbasin respectively. Based on a relative scale, the SAT rating ranges from 1 to 10 (high to least capacity). The confined areas of both subbasins were determined to have relatively high SAT capacity due to the confining layer and deep depth to groundwater. The unconfined areas were largely of good or average capacity. Only a few areas in the unconfined area were regarded as having relatively marginal capacity and even fewer areas were regarded as least capacity. Areas with a lower rating tended to be characterized with shallow depth to water and a coarse grain size distribution in the vadose zone.

Groundwater Degradation Potential

Groundwater degradation potential is defined as the potential for groundwater to be impacted by recycled water used in irrigation. Groundwater is regarded as impacted when the quality is worse than current groundwater quality, with the consideration of the available assimilative capacity. For the purpose of this study, the available assimilative capacity is determined by comparing current groundwater quality with applicable water quality standards, and calculating 20% of the difference between those two values. For constituents where the current groundwater concentration exceeds the water quality standard, there is zero available assimilative capacity for that constituent.

The approach to delineating groundwater degradation potential in the study area is dependent on (1) the hydrogeological characteristics (SAT capacity) and (2) the quality of the recycled water applied for a given area. Compared to the additive approach in evaluating SAT capacity, the input parameters for the groundwater degradation potential are more appropriately evaluated in a multiplicative method. The maximum score for groundwater degradation potential is 100.

SAT capacity rating can range from 1 to 10, such that 10 is indicative of poor SAT capacity and 1 is indicative of high SAT capacity. The recycled water quality rating also ranges from 1 to 10, such that 10 is indicative of relatively poor recycled water quality (generally higher constituent concentrations), and 1 is indicative of relatively high recycled water quality (generally lower constituent concentrations).

The recycled water quality rating is dependent on (1) the concentration of the recycled water applied, (2) the threat of each constituent determined in Volume III of this study, and (3) representative groundwater quality in the study area. The recycled water quality is evaluated based on an aggregate index method using multiple subindices. In this case, the subindices refer to the constituents. The aggregate index is normalized to a scale from 1 to 10. A rating of 10 is indicative of relatively low recycled water quality (maximum recycled water concentrations) and a rating of 1 is indicative of relatively high recycled water quality (recycled water concentrations equal to groundwater concentrations).

Groundwater degradation potential maps are found in IV-3-3 and IV-3-4 for the Santa Clara and Llagas Subbasin respectively. Groundwater degradation potential in the Santa Clara Subbasin is largely of lowest to average potential with a few areas regarded as high or highest. The rating in the Santa Clara Subbasin ranges from 8 to 96. Groundwater degradation potential in the Llagas Subbasin is largely of lowest to average potential and with a few areas regarded as high. The evaluation did not find any areas of the highest potential in the Llagas Subbasin. In the Llagas Subbasin, the groundwater degradation potential rating ranges from 11 to 70. Comparatively, the Santa Clara and Llagas Subbasins share a similar distribution in groundwater degradation potential with a majority of lowest and low potential found in the confined areas and more average potential in the unconfined areas.

VOLUME IV
EVALUATION OF POTENTIAL IMPACTS
RECYCLED WATER STUDY

1. INTRODUCTION

This report was prepared by Locus Technologies (Locus) on behalf of the Santa Clara Valley Water District (SCVWD) for the Recycled Water Irrigation and Groundwater Study (Study). Volume IV assesses the soil aquifer treatment capacity and potential to degrade groundwater quality across the project study area.

This document provides a qualitative screening approach that employs the best professional judgment to extrapolate data from the findings of the previous phases of this study to the entire study area. Previous phases of this study are the literature review and data analysis (Volume I), the soil attenuation model and bench test (Volume II), and the pilot study (Volume III). These earlier phases compiled and reported information that was used to prepare the analysis discussed in Volume IV.

1.1. Purpose

This volume reports the findings from the evaluation of soil aquifer treatment capacity and groundwater degradation potential in the Santa Clara and Llagas Subbasins. The results of the evaluation serve as a tool for determining what quality of recycled water is needed to prevent groundwater quality impacts in specific geographic areas. The findings from this evaluation are important towards determining recycled water screening levels, best management practices, and monitoring recommendation discussed in Volume V. The following goals were identified for the evaluation:

- Provide a comparative evaluation for soil aquifer treatment capacity, specific to recycled water as an irrigation source, for any given location in the project study area.
- Provide a comparative evaluation for the groundwater degradation potential for any given location using the local recycled water sources in the project study area.

The focus of this phase of the study is chemical constituents, including those of anthropogenic and non-anthropogenic origins that have been evaluated in the previous phases of the study (Volumes I to III). A few constituents of concern are biological.

Soil aquifer treatment capacity is defined as the ability of the soil and aquifer to naturally treat contaminants. The study's focus is on contaminants found in recycled water. Mechanisms to lower the concentrations of contaminants include but are not exclusive to volatilization, dispersion, diffusion, sorption, precipitation, ion exchange, oxidation-reduction, transformation, and filtration. Soil aquifer treatment capacity is established from the hydrogeological characteristics of a given area.

Groundwater degradation potential is defined as the potential for groundwater to be impacted by recycled water used in irrigation. Groundwater is regarded as impacted when the quality is worse than current groundwater quality, with the consideration of the available assimilative capacity. Groundwater degradation potential is not only determined by the hydrogeological characteristics of a given area but is also dependent on the quality of the recycled water applied.

1.2. Approach

To determine regional zones for soil aquifer treatment capacity and groundwater degradation potential, AutoCAD Map 3D software was used to compile and evaluate the criteria discussed. AutoCAD Map 3D is a mapping software tool for visualizing, managing, creating and analyzing geographic information system (GIS) data. Multiple sets of geographic data are used to determine relative soil aquifer treatment capacity and groundwater degradation potential.

The methodology used in this document is an adaptation of EPA's DRASTIC system, adapted to the use of recycled water for irrigation using the findings from the pilot study, bench test, soil attenuation model, and literature review. DRASTIC was published in 1987 and lays out an established methodology for evaluating groundwater pollution potential using hydrogeologic settings (USEPA, 1987).

The core of DRASTIC's evaluation system is a weighting and rating system of several factors. The methodology used in this document is an adaptation of the DRASTIC evaluation system using a rating from one to ten and a weighted average of each of the factors. The criteria incorporate a range of hydrogeological factors from the surface and subsurface. Hydrogeological factors at the surface include the topography area and the amount of recharge entering the system. In the subsurface, hydrogeological factors include the depth to groundwater, the type of soils in the subsurface, and the hydraulic conductivity of the aquifer. The adapted evaluation utilizes a subset of these factors which were found to be relevant to the evaluation of recycled water irrigation's potential effect on groundwater. Each criterion is weighted, by a percentage, which depend on the level of relevance. The sum of all the weighting from each criterion is equal to 100%. The numerical evaluation allows for a comparison of different areas of the relative risk of degradation from the use of recycled water use in irrigation.

The values for each criterion are ranked (up to 10), reflecting the criterion's impact on soil treatment capacity or groundwater degradation potential. A higher rating denotes lower soil treatment capacity and consequently greater groundwater degradation potential. For example, areas with a greater depth to groundwater would have greater soil attenuation capacity and would be assigned a low rating. Areas with a shallow depth to groundwater (i.e. high water table) would have less soil attenuation capacity and would be therefore given the highest rating for this input.

2. SOIL AQUIFER TREATMENT CAPACITY

Soil aquifer treatment capacity is the ability of the soil and aquifer to naturally remove contaminants. The unsaturated or vadose zone acts as a natural filter and can lower the concentration of constituents found in recycled water. Additional reduction is achieved in the aquifer from residence time in the aquifer before extraction for beneficial use. Mechanisms to lower the concentrations of contaminants of concern include volatilization, dispersion, diffusion, sorption, precipitation, ion exchange, oxidation-reduction, transformation, and filtration. For the purpose of this study, general physical parameters of the soil are used to help evaluate the combined potential for soil aquifer treatment rather than attempting to quantify each mechanism separately. Findings from the previous phases of the study, namely the literature review, data analysis, soil modeling, bench test and pilot test, were used to support a comparative evaluation of soil aquifer treatment capacity.

For this study, the soil aquifer treatment capacity focuses on attenuation that is achieved before reaching groundwater. Attenuation that is potentially achieved in the aquifer is not considered part of the soil aquifer treatment capacity for this study. Assimilative capacity differs from soil aquifer treatment capacity, in that assimilative capacity refers to the capacity of the groundwater to degrade without affecting beneficial use. Soil aquifer treatment capacity in this study refers to the capacity of the subsurface to remove contaminants before reaching groundwater.

2.1. Methodology

2.1.1. DRASTIC

DRASTIC was published in 1987 by the EPA. DRASTIC lays out a methodology for evaluating groundwater pollution potential using hydrogeologic settings (USEPA, 1987). DRASTIC is a system of weighted ratings. The name, DRASTIC, is an acronym for the seven major factors in the rating system that includes depth to water (“D”), net recharge (“R”), aquifer media (“A”), soil media (“S”), topography (“T”), impact of the vadose zone media (“I”), and hydraulic conductivity of the aquifer (“C”) (USEPA, 1987). Using the DRASTIC method as a starting point, the values and relative importance of these inputs were adapted using data collected from previous phases of this study, as discussed below for each input.

2.1.2. Evaluation Assumptions

Assumptions in this evaluation are

1) The contaminant is introduced at the ground surface through application of recycled water. The study is concerned with recycled water as an irrigation source, which is applied at the surface. Typically, irrigation is applied at the surface; however recycled water can also be introduced using buried drip irrigation systems with buried emitters. Buried irrigation systems are still located close to the surface, where the root zone is located. Therefore, the assumption of surface application is still appropriate.

2) The contaminant is flushed and moved advectively toward groundwater by precipitation and irrigation. If attenuative processes were not present, the fate of a contaminant would be towards the groundwater. The assumption also implies that there is no runoff. By regulation, no volume of recycled water is allowed as runoff, and irrigation systems should be maintained and adjusted so that no runoff occurs.

3) For areas with both a confined and unconfined aquifer, the groundwater of concern for the purpose of this evaluation is in the confined aquifer. In portions of the study area, an unconfined aquifer lies atop a confined aquifer. The groundwater that is used in these areas is typically from the confined aquifer which is considered to be the principal groundwater supply aquifer. Therefore, the input parameters for the confined areas relate to the deep, confined zone rather than the shallow unconfined zone. This evaluation may not be protective for shallow unconfined groundwater where a confined deeper aquifer is also present.

4) Percolation is not short circuited by fractures. The evaluation assumes that preferential flow paths from fractures or other vertical conduits (e.g. abandoned wells) are not present. Percolation occurs through the pores of the soil matrix.

2.1.3. GIS Tool

To determine regional zones for soil aquifer treatment capacity and groundwater degradation potential, AutoCAD Map 3D software was used to compile and evaluate the factors discussed. AutoCAD Map 3D is a mapping software tool for visualizing, managing, creating and analyzing geographic information system (GIS) data. Multiple sets of geographic data are factored into determining soil aquifer treatment capacity.

2.2. Evaluation Criteria

2.2.1. Depth to Water

The depth to groundwater is the vertical distance water must travel from the surface to reach groundwater. In general, a longer distance allows for more contact time through the soil for attenuation processes to occur. As discussed in Section 2.1.1, the target aquifer of concern is the confined aquifer where the principal groundwater supply aquifer is protected by a confining layer, and the shallowest aquifer for all unconfined areas. Values for this input are based on this assumption, so that the depth to the top of the aquifer is used for confined areas, and the depth to the water table is used for unconfined areas.

In the Santa Clara Subbasin, depth to shallow groundwater ranges from 0 to over 100 feet bgs (SCVWD, 2004). The principal aquifer depth in confined areas of the Santa Clara Subbasin was over 100 feet bgs. In the Llagas Subbasin, the depth to shallow groundwater varies from 10 to 100 feet bgs in the northeast region of the basin to less than five feet bgs to the south. The principal aquifer depth in confined areas of the Llagas Subbasin ranges from 50 ft bgs to over 100 ft bgs.

2.2.1.1. Derivation of Ratings

Ratings for the Depth to Water input were derived and calibrated using results from the pilot study in Volume III, as shown in Table IV-2-1. The pilot study included sampling of recycled water constituents in the irrigation source water and also in the subsurface at five feet, at ten feet, and in the groundwater (approximately 30 feet bgs).

From the pilot study, the percentage of removal of total haloacetic acids (HAA6) was used as the indicator for the attenuation capacity at different depths. HAA6 was selected for this purpose because (1) it was consistently quantifiable in the recycled water sources and in the subsurface, (2) this constituent is the sum of six analytical constituents and therefore less prone to analytical variability, and (3) within the pilot study, the only origin of this constituent is from recycled water. The concentration of HAA6 in the recycled water source was calculated as the average total HAA6 concentration for all eight sampling events, to represent the net contribution of this constituent over the entire duration of the pilot study. The concentration of HAA6 in the subsurface was calculated as the average of the last two events of the pilot study, so that long-term conditions can be represented without relying entirely on a single sampling event.

Removal percentages of HAA6 were calculated by comparing the concentrations at 5 feet, 10 feet, and 30 feet to the concentration in the recycled water used for irrigation. The percentage removal at 10 feet and 30 feet were then compared to the percentage removal at 5 feet. This ratio represents the increased attenuation capacity at depths of 10 feet and 30 feet compared to 5 feet. From this analysis, there was 1.14 times more attenuation capacity at 10 feet, and 1.31 times more attenuation capacity at 30 feet, compared to 5 feet. The Depth to Water rating for 5 feet (DRASTIC default of 10) is then adjusted by these factors to obtain Depth to Water ratings for 10 feet and 30 feet. Values for other depths were extrapolated from the calibrated values using a trend line as shown in Figure IV-2-1 and can be expressed as

$$[\text{Depth to Water Rating}] = 12.544\times[\text{Depth to Water}]^{-0.1483}$$

A geometric trend was used to fit the data because the rate of removal is expected to be constant over depth for a given soil type.

Depth to Water		
Weighting: 49%		
Range (ft)	Default DRASTIC Rating	Customized Rating
0-5	10	10
5-15	9	8.4
15-30	7	7.6
30-50	5	7.0
50-75	3	6.6
75-100	2	6.3
100+	1	6.0

Compared to the default DRASTIC rating, the customized rating has a shorter range (6 to 10).

2.2.1.1.1.Sensitivity Analysis

A sensitivity analysis was done on the derivation using haloacetic acid data due to the limited data in the groundwater. Results of the sensitivity analysis are also included in Table IV-2-1. For the haloacetic acid data in groundwater, there was one detected value which was qualified (“J” flag). Specifically, this value is 0.26 J µg/L for the monochloroacetic acid in MW-2 in the eighth sampling event. The “J” flag indicates that the value is an estimate between the method detection limit and the laboratory reporting limit. Estimates in this range are at a lower confidence than detection at or above the reporting limit. Because of the reliance on this one data point, the sensitivity of the results using this value was tested by substituting the value for zero (Scenario 1) and for the reporting limit (2 µg/L) (Scenario 2).

The resulting ratings from the sensitivity analysis did not reveal significant changes to the DRASTIC ratings. In scenario 1, the ratings did not change from the base scenario. There was a slightly higher percentage removal at 30 feet but the change was not prominent enough to affect the depth to water rating. In scenario 2, the ratings did not change significantly from the base scenario. There was a lower percentage removal at 30 feet and this translated into a slightly higher depth to water rating at 30 feet (7.9 as opposed to 7.6). Overall, the derivation for the depth to water rating was determined to have low sensitivity to the specified groundwater data point within the range between 0 and 2 µg/L.

2.2.1.2. Data and Calculation

GIS data for the depth to water was supplied from the SCVWD website and from *Groundwater Vulnerability Study, Santa Clara County, California* (SCVWD, 2010). Geographic data for depth to water was determined by two different sources of data: one set for confined areas, and another for unconfined areas. For the unconfined areas in the Santa Clara and Llagas Subbasins, data was derived from the SCVWD using minimum depth to water measurements at fuel leak sites. Data from fuel leak sites for the coverage spanned from 1980 to just prior to the publication date (October 15, 2003) of the geographic data. For unconfined areas, the depth to water is the distance from the ground surface to the water table.

For confined areas, the depth to groundwater is the distance from the ground surface to top of the confined aquifer. Data for this is defined using the depth to the top of the first well screen of public water supply wells. Data for depth to groundwater for confined aquifers was obtained from *Groundwater Vulnerability Study, Santa Clara County, California* (SCVWD, 2010).

The depth to water ratings for Santa Clara and Llagas Groundwater Subbasins, as calculated from the depth to water data, are shown on Figures IV-2-2 and IV-2-3. Depth to water is given a weighting factor of 49%. The weighting factor is determined using a calibration method with the soil attenuation model. Section 2.4 describes in detail the procedure for establishing the weighting factor.

2.2.2. Soil Media

The soil media refers to the first several feet of soil from the land surface, commonly an average of six feet or less. The soil in this zone is generally characterized by a high amount of organic matter. Organic matter is composed of undecayed plant and animal tissue, charcoal and humic substances. Humic substances are largely responsible for adsorption and complexation processes in the soil. Soil provides attenuation of recycled water contaminants through biodegradation, filtration, volatilization, and sorption. Biodegradation and volatilization, as well as organic content, decrease with depth. Coverage of soil media was determined from a previous DRASTIC analysis of the study area conducted by the SCVWD (SCVWD, 1999). The coverage used a soil map developed by the United States Soil Conservation Service. The soil classifications were analyzed and assigned for each area.

Soil media was found to be a significant factor in how well a recycled water constituent was attenuated. In the soil attenuation model and bench test, the study verified that constituents generally attenuate better in fine grain soils, followed by semifine and coarse soils.

2.2.2.1. Derivation of Ratings

Ratings for the soil media input were calibrated using results from the bench test in Volume II, as shown in Table IV-2-2. The bench test included eight soil cores, which were irrigated with recycled water. The soil cores were selected to represent different soil types observed within the study area. The recycled water used in the bench test was obtained from the SJ/SC WPCP and the SCRWA Plant in Gilroy. Five of the eight soil cores irrigated with recycled water from the bench test yielded sufficient effluent for chemical analysis. These cores are listed in Table IV-2-2, with the soil characterization of each core as originally documented, and also as would be classified for the DRASTIC soil media input.

From the bench test, the percentage of removal of total trihalomethanes was used as the indicator for the attenuation capacity of the varying soil types. Total trihalomethanes were selected for this purpose because (1) they were consistently quantifiable in the recycled water sources and in the effluent from each of the soil cores, (2) this constituent is the sum of four analytical constituents and therefore less prone to analytical variability, and (3) within the bench test, trihalomethanes can be uniquely attributed to the recycled water source. Removal percentages of total trihalomethanes were calculated by comparing the final effluent sample from each core to the initial recycled water influent sample for each core. The final effluent sample was used to better represent long-term conditions, and the initial influent sample was used to account for the estimated travel time through the soil cores.

Because the soil cores varied in length, the percentage removals for the four-foot soil cores were normalized to one foot. This calculation was done assuming a constant percentage removal over each foot of the four-foot soil cores, using the following equation:

$$[\text{1-ft Removal}] = 1 - (1 - [\text{4-ft Removal}])^{1/4}$$

Once normalized, the percentage removal of total trihalomethanes from each soil core was compared to the percentage removal through sand. This ratio represents the increased attenuation capacity for silt and clay compared to sand. From this analysis, the silt core had 1.70 times more attenuation capacity than sand, and the clay cores had 3.63 to 3.86 times more attenuation capacity than sand. The soil media rating for sand (DRASTIC default of 7) is then adjusted by these factors to obtain soil media ratings for silt and clay. Values for soil types not included in the bench test were interpolated from the calibrated values for sand, silty loam, and massive clay.

Soil media is ranked in the following categories:

Soil Media		
Weighting: 25%		
Range	Default DRASTIC Rating	Customized Rating
Sand Loam to Sand	7	7
Sandy Loam	6	6
Silty Loam	4	4
Clay Loam	3	3
Massive Clay	1	2

2.2.2.2. *Data and Calculations*

Soil media data were obtained from *Groundwater Vulnerability Study, Santa Clara County, California* (SCVWD, 2010). Soil media in the study area include sand loam to sand, sandy loam, silty loam, clay loam, and massive clay. Soil media rating is determined accordingly with grain size which affects the hydraulic conductivity. Soils with high clay content have lower hydraulic conductivity which slows the transport of constituents and increases the time for filtration and other attenuative processes. Shrinking/aggregated clays are characterized by their significant capacity to expand and contract. Montmorillonite and smectite are examples of expansive clays.

The soil media ratings for Santa Clara and Llagas Groundwater Subbasins are shown on Figures IV-2-4 and IV-2-5. Soil media is given a weighting factor of 25%. The weighting factor is determined using a calibration method with the soil attenuation model. Section 2.4 of this volume describes in detail the procedure for establishing the weighting factor.

2.2.3. Impact of the Vadose Zone Media

The impact of the vadose media refers to the depth above the water table in the unsaturated or partially saturated zone. For confined aquifers, the vadose zone includes the aquitard and the unconfined aquifer above the top of the aquifer and below the soil. The vadose zone provides attenuation of recycled water contaminants through biodegradation, filtration, volatilization, dispersion, and chemical reaction. Biodegradation and volatilization decrease with depth.

Categories for the vadose zone media depend on whether the aquifer is confined or unconfined. Following DRASTIC procedure, the lithologic layer that most significantly controls the attenuation potential for each area is used to represent the vadose zone. For areas with a confined aquifer the appropriate vadose zone medium is the confining layer, since the presence of a confining layer controls the attenuation and transport through the vadose zone. For unconfined areas, the representative vadose zone medium is determined by calculating the net hydraulic conductivity through the entire vadose zone, and assigning the vadose zone medium that best represents that hydraulic conductivity.

2.2.3.1. Derivation of Ratings

The attenuation capacity for the vadose zone can be evaluated using the same approach used for the soil media described in Section 2.2.2. Therefore, the calibration of this input follows a similar procedure, with the ratio of total trihalomethane removal being used to derive vadose zone media ratings for silt and clay from the rating for sand (default of 6 for the sand end of the range). The derivation of these ratings is shown on Table IV-2-2, and the results are summarized below.

Impact of the Vadose Zone Media			
Weighting: 26%			
Range	DRASTIC Default Rating	DRASTIC Default Typical Rating	Customized Rating
Confining Layer	1	1	1
Clay	2-6	3	2
Silt	2-6	3	3
Loam	4-8	6	4
Sand	6-9	8	6
Gravel	6-9	8	9

2.2.3.2. Data and Calculations

GIS data for the vadose zone media was calculated using SCVWD's database of lithology data for wells, and the GIS depth to water data discussed in Section 2.2.1. First, the depth to water values were extracted from the GIS data at each well where lithology data were available. The lithology data set was then filtered to remove data below the depth to water, so that only lithology data for the unsaturated vadose zone remained. The lithology information at each location was then categorized and assigned hydraulic conductivity values using values from Fetter (1994) as shown in Table IV-2-3. For soil types that include multiple grain sizes, the category was selected based on the best representation of hydraulic conductivity, which generally corresponds to the fine-grained material.

Net vertical hydraulic conductivity at each location was then calculated using the following equation (Fetter, 1994):

$$[\text{net hydraulic conductivity}] = \frac{\sum_{m=1}^{n} [\text{layer thickness}]_m}{\sum_{m=1}^{n} \frac{[\text{layer thickness}]_m}{[\text{layer hydraulic conductivity}]_m}}$$

This equation combines the hydraulic conductivities for each lithologic layer into a single value at each location. The net hydraulic conductivities were then converted back into a soil type using the value ranges listed in Table IV-2-3. Those values were then developed into a data set for the entire study area using thiessen polygons. The net result is a distribution of soil types that adequately characterize the vadose zone over the study area. In all confined areas, the vadose zone rating was set to 1, because the confining layer controls this input for those areas.

The impact to vadose ratings for Santa Clara and Llagas Groundwater Subbasins are shown on Figures IV-2-6 and IV-2-7. Impact of vadose zone media is given a weighting factor of 26%. The weighting factor is determined using a calibration method with the soil attenuation model. Section 2.4 describes in detail the procedure for establishing the weighting factor.

2.3. Omitted Evaluation Criteria

Several input factors that are included as part of the standard DRASTIC evaluation process were not included in the adapted version for this study. Those factors and the rationale for their omission from this study are discussed below.

2.3.1. Net Recharge

Net recharge is the amount of water per unit area that percolates from the surface to the groundwater and is typically represented by precipitation. In this study, irrigation serves as an additional source of recharge. Recharge water is the main vehicle for leaching and transporting contaminants downward. The greater the net recharge, the greater the potential for transport of contaminants to groundwater.

Net recharge is not included in this evaluation. Net recharge for this study is predominantly water from irrigation rather than precipitation. In the pilot study, nearly 80% of water at the surface was from irrigation. The remaining 20% was from precipitation. Geographically, the water needs for similar types of vegetation are not expected to vary greatly across the Santa Clara and Llagas Subbasins. This is because reference evapotranspiration rates, associated with irrigation rates, are the same throughout the study area (CIMIS, 1999). In addition, the landscaping and irrigation rates may be modified at any time by property owners, making it inappropriate to set a fixed value for net recharge at any location. Annual precipitation rates in the Santa Clara and Llagas Subbasins, from 1961 to 1990, approximately range from 5 to 25 inches per year (Natural Resources Conservation Services, 1961 to 1990). Precipitation can vary within the study area but the variation is minimized by the larger contribution from irrigation.

2.3.2. Topography

Topography in DRASTIC is the land surface's slope and slope variability. A pollutant is less likely to infiltrate into the soil when the land surface is more sloped. Steeper slopes also generally signify higher groundwater velocity.

Topography is not included in this evaluation. Topography in DRASTIC refers to slope and slope variability on a large scale of a regional area, which can influence the overall infiltration rate. But for this study, recycled water infiltration is more affected by local topography of each landscaped site. Higher infiltration of recycled water occurs in small-scale low points in the site topography. However, this level of detail for topography is not available as GIS data, nor is it practical to assemble data at this scale. Topography at this level can also be modified by property owners during construction activities, so it cannot be considered constant.

In addition, Title 22 regulations for recycled water use prohibit any runoff of recycled water from the recycled water use area, unless the runoff does not pose a public health threat and is authorized by the regulatory agency (Title 22, §60310 (e)). Therefore, large-scale topography would not have a significant impact on recycled water infiltration.

2.3.3. Aquifer Media and Hydraulic Conductivity of Aquifer

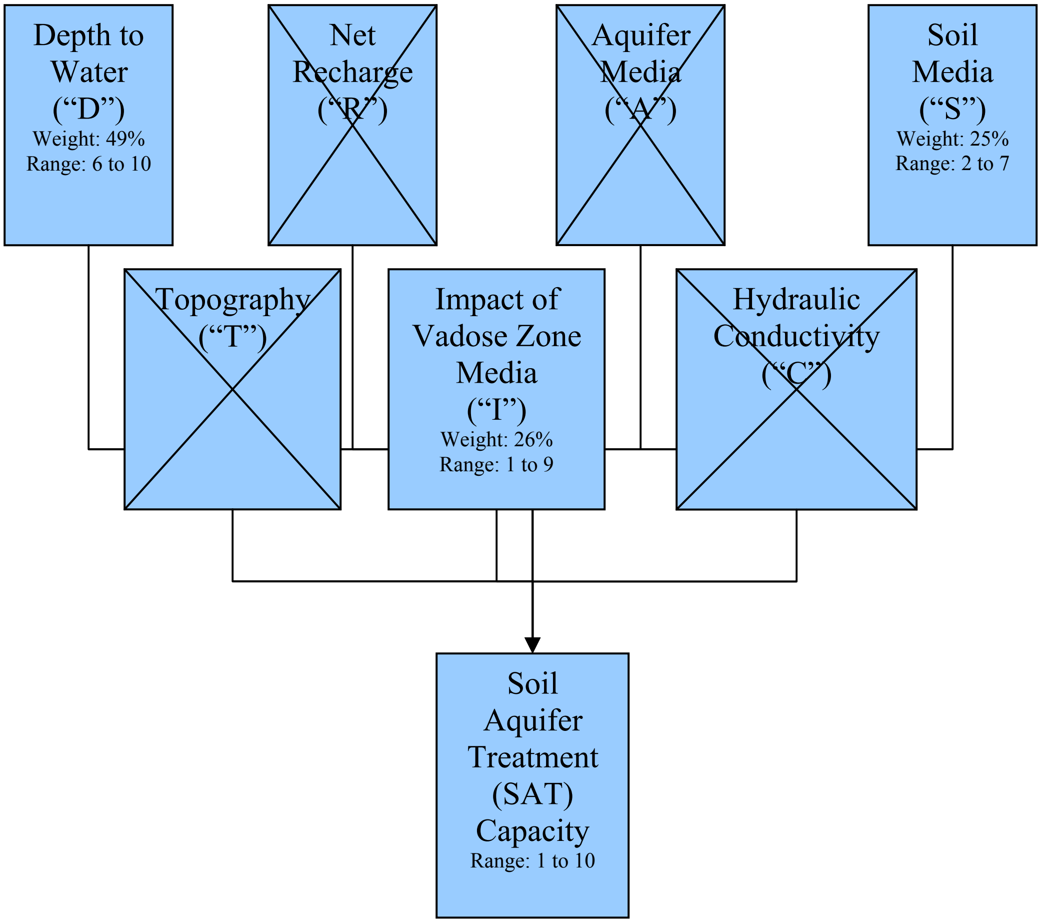
The aquifer media refers to the consistency of the porous material comprising the aquifer. Attenuative processes that can take place in the aquifer include sorption, transformation, and dispersion. The media of the aquifer determines the flow path and path length which in turn determines amount of time for attenuation. Larger grain sizes of the aquifer media correspond with higher porosity, which generally leads to higher permeability. Aquifers with high permeability are associated with lower attenuation capacity due to the decrease in soil contact time, which reduces any potential attenuation and increases potential for a contaminant to migrate quickly. Aquifer media also influences attenuation due to the effective surface area of the media.

The hydraulic conductivity of the aquifer refers to the permeability of the aquifer. For a given hydraulic gradient and hydraulic conductivity, the groundwater flow rate can be determined. Higher values of hydraulic conductivity are associated with lesser soil aquifer treatment capacity due to less time within the aquifer for attenuative processes to occur and greater potential for contaminants to travel. Attenuative processes that can take place in the aquifer include sorption, transformation and dispersion.

Aquifer media and hydraulic conductivity of aquifer are not included in this evaluation. Both of these inputs are criteria associated with treatment within the aquifer. Since the focus of this evaluation is the attenuative capacity before reaching groundwater, aquifer-related attenuation is not considered.

2.4. Weighting and Rating System Flowchart

The evaluation system comprises three factors each assigned a rating which can range from 1 to 10. Each factor is also weighted by a percentage based on the importance of the factor evaluated. The numerical evaluation allows for comparison of different areas for recycled water use in irrigation. Below is a flow chart of the variables used to determine SAT capacity.



Notes:
1) The seven factors above are the original DRASTIC inputs. Four of these factors are crossed indicating that they are not used in evaluating the SAT capacity.
2) Weight is the weighting or contribution assigned to the factor in determining the SAT capacity.
3) Range is the set of values that are valid for the factor or SAT capacity.

2.5. Calibration of Input Weightings

To determine the weighting of each input into the modified DRASTIC evaluation, the soil attenuation model from Volume II was used. A baseline scenario was used in the model to represent average conditions observed within the study area. Modifications were made individually to one of the evaluated model inputs (depth to water, soil media, and vadose zone media) to determine the net effect of that input on the modeled groundwater concentrations.

For the baseline scenario, the depth to groundwater was 40 feet (12.2 meters), with the first 6.6 feet (2 meters) defined as the soil media and the remaining soil profile as the vadose zone. The depth to groundwater of 40 feet is a median value for the study area, where it ranges from 0 to 100 feet. Silt was used as the baseline soil type for soil media and vadose zone. Silt is also a median value given the range of soil types observed in the study area. Attenuation levels were evaluated at the 40 foot depth and at the 50-year time frame. Chloroform was used as the constituent modeled. Chloroform, as seen in the soil attenuation model in Volume II, behaved in a manner that was consistent with the bench test and pilot study findings.

Using the base conditions as a starting point, the model inputs were then adjusted to determine differences in attenuation resulting from those changes. The core concept of this calibration is that relative to each factor, the weighting is proportional to the change in attenuation per unit change in rating. An alternative way this can be stated is the weighted change in rating per unit change in attenuation from each input contributes equally to the soil aquifer treatment capacity. Mathematically, this can be expressed as:

$$\frac{W_D \times \Delta\text{Rating}_D}{\Delta\text{Attenuation}_D} = \frac{W_S \times \Delta\text{Rating}_S}{\Delta\text{Attenuation}_S} = \frac{W_I \times \Delta\text{Rating}_I}{\Delta\text{Attenuation}_I}$$

and

$$W_D + W_S + W_I = 100\%$$

Where:

W = percent weight of input.
ΔRating = change in rating of input.
ΔAttenuation = change in attenuation of input.
D = depth to groundwater input. (discussed in Section 2.2.1)
S = soil media input. (discussed in Section 2.2.4)
I = impact of vadose zone media input. (discussed in Section 2.2.6)

Following these equations, the weighting of each input was determined using the modeled changes in attenuation caused by fixed changes in inputs. For the depth to groundwater input, the calibration used the attenuation difference from the 40 foot depth to the 5 foot depth. For the soil media, the calibration used the attenuation differences from silt to clay. For the impact of vadose zone media, the calibration used the attenuation differences from silt (silt loam was the appropriate category for this input) to clay.

The calibration determined the relative weighting of depth to groundwater, soil media, and impact to vadose zone to be 49%, 25%, and 26% respectively. Calculations and results of the calibration are displayed in Table IV-2-4. Graphs from the soil attenuation model used to determine the attenuation achieved are displayed in Figures IV-2-8 to IV-2-10.

2.6. Soil Aquifer Treatment Capacity Zones

Using the ratings and weighting factors discussed above, the relative soil aquifer treatment capacity is calculated as follows:

$$
\begin{aligned}
\left[\text{Soil Aquifer Treatment Capacity}\right] = {} & \left[\text{Weighting Factor for Depth to Water}\right] \times \left[\text{Depth to Water Rating}\right] + \\
& \left[\text{Weighting Factor for Soil Media}\right] \times \left[\text{Soil Media Rating}\right] + \\
& \left[\text{Weighting Factor for Impact to Vadose Zone}\right] \times \left[\text{Impact to Vadose Zone Rating}\right]
\end{aligned}
$$

After the calculation using the above equation, the values are rescaled such that the worst capacity found in the study area is set to 10 and the best capacity found in the study area is set 1. The unscaled range was found to be from 3.7 to 8.21. The net distribution of soil aquifer treatment capacity for the Santa Clara and Llagas Groundwater Subbasins are shown on Figures IV-2-11 and IV-2-12. The following is a description of the rating of the soil aquifer treatment capacity.

1 to 2 – High Capacity

A rating of 1 or 2 denotes areas with the highest capacity to attenuate constituents of recycled water relative to the range of hydrogeological conditions in the evaluation. These areas contain physical characteristics that are most ideal for the application of recycled water and protection of groundwater sources.

3 to 4 – Good Capacity

A rating of 3 or 4 denotes areas with good capacity to attenuate constituents of recycled water relative to the range of hydrogeological conditions in the evaluation. These areas contain physical characteristics that provide reasonably good capacity for soil aquifer treatment of recycled water constituents.

5 to 6 - Average Capacity

A rating of 5 or 6 denotes areas with average capacity to attenuate constituents of recycled water relative to the range of hydrogeological conditions in the evaluation. These areas contain physical characteristics that may provide some capacity for soil aquifer treatment of recycled water constituents.

7 to 8 - Marginal Capacity

A rating of 7 or 8 denotes areas with marginal capacity to attenuate constituents of recycled water relative to the range of hydrogeological conditions in the evaluation. These areas contain physical characteristics that have less capacity for soil aquifer treatment of recycled water constituents.

9 to 10 - Least Capacity

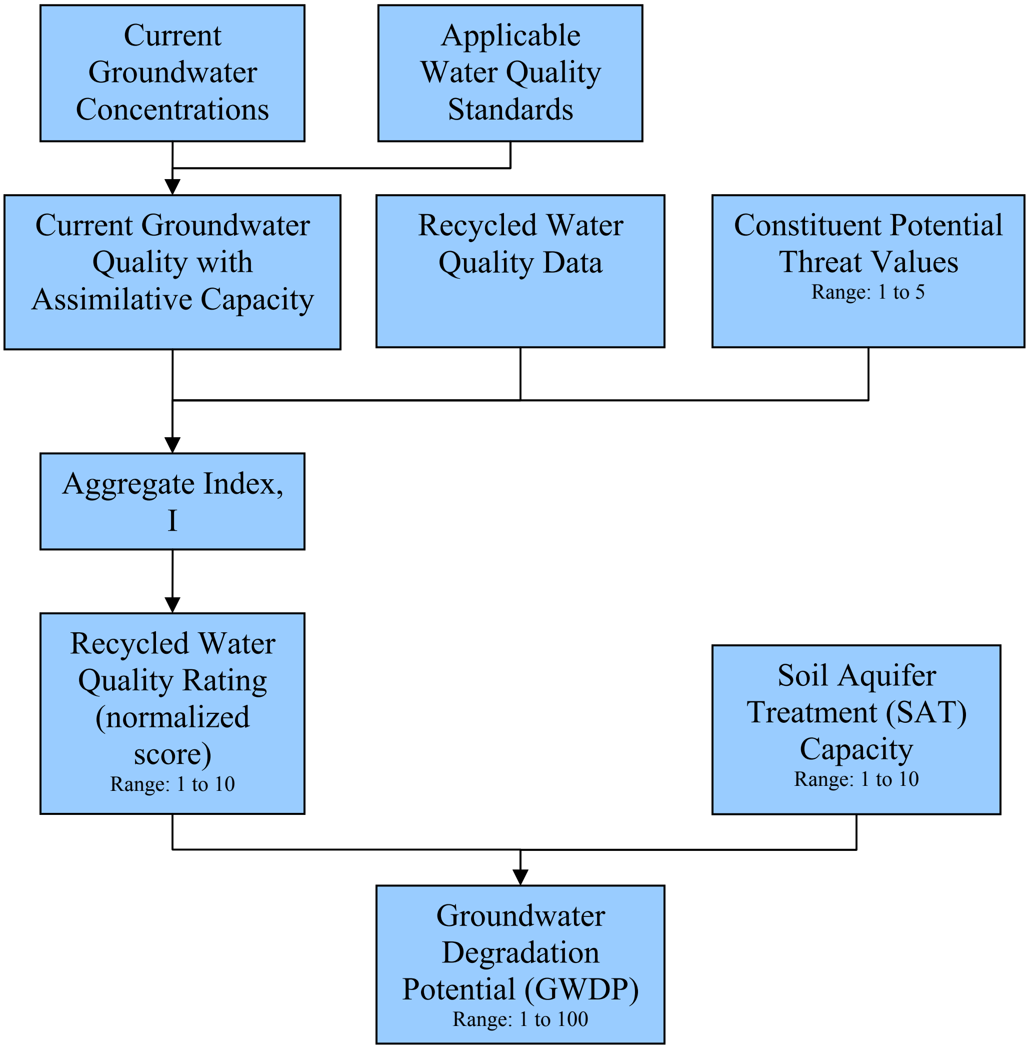
A rating of 9 or 10 denotes areas with the least capacity to attenuate constituents of recycled water relative to the range of hydrogeological conditions in the evaluation. These areas contain physical characteristics that are least ideal for soil aquifer treatment of recycled water constituents.

3. POTENTIAL TO DEGRADE GROUNDWATER QUALITY

Chapter 3 describes the methodology to determine the potential for recycled water as an irrigation source to degrade groundwater quality. The evaluation to determine the potential to degrade groundwater quality is directly related to the soil aquifer treatment capacity but also includes consideration of the quality of the recycled water.

3.1. Methodology

Methodology for determining groundwater degradation potential is a multiplicative rather than an additive approach of ratings from two evaluation criteria. The evaluation incorporates two inputs: 1) the soil aquifer treatment capacity, discussed in Chapter 2, and 2) the quality of the recycled water used for irrigation. The multiplication of these two ratings provides a range of the groundwater degradation potential up to maximum value of 100. This potential is calculated by multiplying the ratings so that a low rating in either input (meaning either excellent soil aquifer treatment capacity or very high quality recycled water), would result in relatively low groundwater degradation potential. Conversely, higher ratings for both inputs would cause a synergistic effect with significantly increased degradation potential if soil aquifer treatment capacity and recycled water quality are both low. Below is a flow chart of the variables used to determine the groundwater degradation potential.


Current Groundwater Concentrations
Applicable Water Quality Standards
Current Groundwater Quality with Assimilative Capacity
Recycled Water Quality Data
Constituent Potential Threat Values
Range: 1 to 5
Aggregate Index, I
Recycled Water Quality Rating (normalized score)
Range: 1 to 10
Soil Aquifer Treatment (SAT) Capacity
Range: 1 to 10
Groundwater Degradation Potential (GWDP)
Range: 1 to 100

3.2. Evaluation Criteria

3.2.1. Soil Aquifer Treatment Capacity

Soil aquifer treatment capacity was determined from Chapter 2 of this volume. SAT capacity incorporates hydrogeological parameters to rate the ability to attenuate recycled water constituents. Soil aquifer capacity rating ranges from one to ten, ten being the worst in terms of soil aquifer treatment capacity. The soil aquifer treatment capacity is a key input for evaluating the potential for recycled water to degrade groundwater quality.

3.2.2. *Recycled Water Quality Rating*

The recycled water quality is a necessary input for determining the groundwater degradation potential. Soil aquifer treatment capacity does not include consideration of the quality of the recycled water applied. Quality is dependent on the concentrations of the constituents found in the recycled water. Generally, the higher the quality of water of a given source is, the less potential for groundwater to be degraded. Groundwater is regarded as degraded when the quality becomes worse than the current groundwater quality, with consideration of assimilative capacity. For the constituents evaluated in this study, this would occur if the concentrations in groundwater increase from current values beyond the available assimilative capacity.

Because recycled water quality is represented by a range of constituents, there is a need to develop an aggregate water quality rating that can be calculated from the available concentration data for each recycled water source. The rating of the recycled water quality is determined using three types of information: 1) current groundwater quality in the study area, 2) the concentrations in recycled water, and 3) the relative threat of each constituent determined in Volume III of this study.

3.2.2.1. *Current Groundwater Quality*

Current groundwater quality is important in considering potential for groundwater degradation. For this study, mean groundwater concentration data and the assimilative capacity are used to represent the groundwater quality of the study area.

3.2.2.1.1.Groundwater Concentrations

Data used in this evaluation for groundwater quality was derived from SCVWD's database, and included data from 1973 to 2007. Additional data from the California Groundwater Ambient Monitoring and Assessment (GAMA) program (Ray et. al., 2009) and the pilot study baseline data from Volume III were also included to supplement SCVWD data. Statistics of the resulting dataset are found in Table IV-3-2.

For constituents with less than fifty available records in the SCVWD database, available data from the California GAMA program and pilot study were used. For the GAMA program, only data from wells located in the Santa Clara County were extracted. Where the accumulated data set is sufficient to quantify separate mean groundwater concentrations for Santa Clara and Llagas Groundwater Subbasins, the mean groundwater concentration is calculated separately for each subbasin. If the data set for a given constituent has less than 10 records for either groundwater subbasin, the mean groundwater concentration for the entire study area is used for both subbasins.

For the purpose of calculating mean groundwater concentrations, values below the reporting limit (nondetects) are taken as a value of zero. Using this approach, the mean concentration for a constituent may be less than the reporting limit. Where this occurs, the representative groundwater quality is taken to be the reporting limit. Table IV-3-2 contains the typical reporting limits, which are based on the data from the bench test and pilot study. The representative groundwater concentrations used for this evaluation are also listed on Table IV-3-2.

For biological parameters E. Coli, fecal, and total coliforms, the data is presented as frequency of detection rather than mean value. Frequency of detection was considered to be a more appropriate value for this evaluation than the mean value, because it is used frequently for water quality standards. Biological parameters are inherently different from the other constituents in recycled water and are evaluated in a different manner.

3.2.2.1.2.Assimilative Capacity

Assimilative capacity refers to the capacity of groundwater to receive pollutants without reducing the beneficial use (California SWRCB, 2009). For landscape irrigation projects using recycled water, the SWRCB states that the assimilative capacity is to be estimated by the project proponent and a salt and nutrient management plan is to be prepared. In the absence of a specific salt and nutrient management plan for the study area, the calculation of assimilative capacity for this study is as defined by SWRCB for groundwater recharge projects. Numerically, assimilative capacity for recharge projects is the difference between the mineral water quality objective and the average groundwater concentration of the subbasin, over the most recent five years of data available. The mineral water quality objectives are limits of acceptable water quality for beneficial use. If the current groundwater quality is better than the water quality objectives then there is assimilative capacity.

For this evaluation, water quality objectives are compiled using various regulatory standards and guidelines in the following order of priority:

- California Primary Maximum Contaminant Level (MCL)
- Federal Primary Maximum Contaminant Level (MCL)
- Federal Secondary Maximum Contaminant Level (MCL)
- Department of Public Health Notification Level
- Public Health Goal (CA OEHHA)
- EPA's Maximum Contaminant Level Goal
- EPA Health Advisory

These values for recycled water constituents are shown on Table IV-3-1. Where a limit for a given constituent is specified by multiple standards, the standard with the higher priority takes precedence. This means that the water quality objective is not necessarily the lowest limit found among the list of standards and guidelines. The calculation of assimilative capacity using the groundwater concentrations and water quality standards is shown on Table IV-3-1. Where the groundwater concentration is greater or equal to the water quality standard, the assimilative capacity is zero.

For consistency with the SWRCB Recycled Water Policy (SWRCB, 2009), this evaluation allows the use of up to 20 percent of the available assimilative capacity by multiple landscape irrigation projects. Calculations of representative groundwater concentrations with 20 percent of the available assimilative capacity are shown in Table IV-3-1.

3.2.2.2. Recycled Water Quality Data

Recycled water data is needed to measure the relative quality of the water against the representative groundwater quality. Water quality data of the recycled water from the four treatment plants can be found in the *Literature Review and Data Analysis* (Volume I of this report). Summarized data, ranging from 2001 to 2007, of the recycled water constituents from the four treatment plants are shown in Table IV-3-2. Mean data are calculated from sample sizes ranging from 1 to 21 samples. Appendix IV-A includes plot summaries of the available recycled water quality data and conveys the differences in recycled water quality between the four treatment plants. Data for the SJSC WPCP and SCRWA is also supplemented with data from the pilot study and bench test documented in Volume II and III. To be consistent with the calculation of representative groundwater concentration, as discussed in Section 3.2.2.1, nondetect values are evaluated as zero for the purpose of calculating mean recycled water concentrations.

The concentrations of recycled water constituents vary between different sources. Within the subbasins, recycled water is derived from four sources: the Palo Alto Regional Water Quality Control Plant (PARWQCP), Sunnyvale Water Pollution Control Plant (SWPCP), San Jose/Santa Clara Water Pollution Control Plant (SJ/SC WPCP), and the South County Regional Wastewater Authority (SCRWA). Current use of recycled water is geographically limited and thus recycled water is not used everywhere in the subbasins. To identify the potential for degradation throughout the subbasins, the study hypothetically assumes that recycled water is used everywhere in the subbasins. Because there are multiple sources of recycled water, the study uses city boundaries to distinguish which sources of recycled water could be applied in each area. SCRWA is hypothetically assumed to provide recycled water to the Llagas Subbasin which includes the cities of Gilroy and Morgan Hill and all unincorporated areas. Currently, SCRWA recycled water customers are within a small area of the Llagas Subbasin. In the Santa Clara Subbasin, recycled water is assumed to be largely derived from SJ/SC WPCP and to a lesser degree from PARWQCP and SWPCP. This evaluation assumes the city of Palo Alto and Stanford University receive recycled water from the PARWQCP. In Sunnyvale, Mountain View, Los Altos, and Los Altos Hills, recycled water is assumed to originate from SWPCP. Other cities within the Santa Clara Subbasin, including San Jose, Santa Clara, Milpitas, Campbell, Cupertino, Los Gatos, Saratoga, and Monte Sereno are assumed to receive recycled water from the SJ/SC WPCP. The assumed potential distribution of recycled water sources is shown on Figures IV-3-1 and IV-3-2 for both groundwater basins.

For the SWPCP and PARWQCP, not all constituent concentration data are available for these recycled water sources. Where this occurs, mean concentration values from the SJ/SC WPCP are used as a surrogate. While SJ/SC WPCP services a much larger area which includes more industrial activity than the area served by SWPCP and PARWQCP, the treatment trains at the three plants are similar. Therefore, the SJ/SC WPCP recycled water concentrations provide a reasonable surrogate for SWPCP and PARWQCP recycled water concentrations if actual concentration data are not available. Values should be replaced with actual measured concentrations if they become available. However, there are only a few constituents where this assumption needed to be applied, and the overall impact on the results of the evaluation is expected to be relatively minor. The values where this was applied can be seen in Table IV-3-2 where the count for the data is reported as zero.

3.2.2.3. Threat Values

The threat value for each constituent was determined in the *San Jose Pilot Study* (Volume III) and is displayed in Table IV-3-2. The threat to groundwater of each constituent of concern is based on the findings from the pilot study and the bench test. The threats range from 1 to 5, with 5 representing the highest relative threat. The criteria for assigning each threat are generally determined on the observed attenuation of the constituent in the pilot study and bench test, and the type of constituent. The type of constituent can range from general water quality parameters like alkalinity and DO, to emerging contaminants like NDMA and PFCs. The potential health impact of each constituent is also evaluated in assigning the threat. The threat assigned for each constituent below is a combination of these factors. For constituents where behavior was not well observed due to a low occurrence in the source water, a threat of three was assigned. This central value is selected to indicate that although the low occurrence in recycled water may result in lower potential to impact groundwater, the potential for this constituent to migrate to groundwater may be significant if present.

A low threat indicates that the given constituent has shown minimal potential to impact groundwater in the pilot study. A higher threat indicates that the constituent in recycled water has shown significant potential to impact groundwater and may need to be taken into consideration in future recycled water irrigation use.

Some monitored constituents were not consistently detected in the recycled water source during the pilot study or bench test; therefore the threat of these constituents was regarded as inconclusive. Constituents that fall into this category include E. Coli, nitrilotriacetic acid (NTA), perchlorate, cyanide, and terbuthylazine. For the evaluation purposes of determining recycled water quality in Volume IV, the constituents with inconclusive determinations are assigned a default threat of 3, which is an average value within the 1 to 5 threat range. This default value may be reassigned to a more appropriate value if further studies provide provide more information on the potential threat of a given constituent.

3.2.2.4. Calculation Method

The above three factors, current groundwater quality with assimilative capacity (Section 3.2.2.1), recycled water concentrations (Section 3.2.2.2), and threat (Section 3.2.2.3), are used to calculate the recycled water quality rating. The method for determining recycled water quality follows a published aggregation index method (Swamee and Tyagi, 2000 and 2007). The aggregation method aims to avoid ambiguity, eclipsing, and rigidity issues. Ambiguity issues occur when all subindices indicate acceptable water quality, but the aggregate index does not. Eclipsing issues occur when the aggregated index fails to reflect poor water quality of one or more of the water quality variables. Rigidity issues occur when the aggregation function does not allow for new variables to be added to the aggregated index. All of these issues are minimized by the applied aggregation method described below.

The aggregation index, I, can be expressed as:

$$I = \left(1 - N + \sum_{i=1}^{N} s_i^{-1/k}\right)^{-k}$$

Where:

I = Aggregate index of the recycled water quality.

N = Number of subindices considered. In this study, the number of subindices corresponds to the number of constituents evaluated in this method (N=39).

s = Subindex for the individual constituent (calculated as described below).

k = Aggregation exponent, derived as $k = \frac{1}{\log_2(N-1)}$ using an assigned central value for the aggregate index (Swamee, 2007).

The subindices are based on the constituent concentrations, and can be calculated using several methods. For subindices that monotonically decrease with their water quality concentrations, Swamee and Tyagi (2000) recommend the following equation. This equation is recommended as the most appropriate when water quality is consistently considered lower for higher concentrations.

$$s = \left(1 + \frac{q}{q_c}\right)^{-m}$$

Where:

q = Quality of the constituent, which is taken to be the difference between the constituent concentration in recycled water and q_c. q is set to zero if the recycled water concentration is lower than q_c.

q_c = Representative groundwater quality, which is the current groundwater concentration of the given subbasin with 20 percent of the available assimilative capacity as calculated in Table IV-3-1.

m = Subindex exponent.

The subindex exponent, m, varies for each constituent, and it reflects the contribution of the constituent subindex to the overall aggregate index, I. For the purpose of this study, the subindex exponents were correlated to the threat of each constituent, as determined in Volume III (see Section 3.2.2.3). The appropriate distribution for this value was determined to be a positively-correlated function (i.e. increasing threat values cause an increasing impact to the aggregate index). Constituents assigned a threat of 1 should have a negligible effect on the aggregate index. Constituents assigned a threat of 5 should have the most significant effect on the aggregate index.

Using a polynomial distribution, the following function is derived for the subindex exponent:

$$m = [\text{threat}] \times ([\text{threat}] - 1) \times [\text{mscale}].$$

Using this equation, the value for mscale was determined by maximizing the range in aggregate scores between the four recycled water sources. The aggregate indices converge to the same value for high or low values of mscale. For this evaluation, the difference between the aggregate indices was maximized in order to best demonstrate the quality differences between the recycled water sources. The optimized value for mscale was 0.021218. The derivation of this value is shown in Figure IV-3-5.

Per Swamee, the resulting aggregate index, I, ranges from 0 to 1 such that 1 is indicative of high quality water and 0 is indicative of poor water quality. To refit the index for the needs of this study, a modified aggregate index, 1-I (i.e. one minus the aggregate index) is used to represent higher water quality with a decreasing numerical value. The modified aggregate index is rescaled on a range from 1 to 10 using the modified aggregate index of the representative groundwater quality and maximum observed recycled water quality as the minimum and maximum boundary conditions.

Recycled water quality ratings are determined for the recycled water from the four treatment plants in the study area. The results of this calculation are summarized below. Table IV-3-3 summarizes the calculations and results with greater detail.

Parameter	PARWQCP	SCRWA	SJ/SC WPCP	SWPCP
Aggregate Index, I (per Swamee)	0.16	0.37	0.16	0.31
Modified Aggregate Index, 1 – I	0.84	0.63	0.84	0.69
Recycled Water Quality	9.61	7.45	9.63	8.08

Not all constituents were included in the calculation of the recycled water quality ratings. Total alkalinity, bicarbonate alkalinity, dissolved oxygen, total chlorine, oxidation reduction potential, and pH are general water quality parameters and are not included in the analysis. To avoid double counting, total dissolved solids (TDS) was not included in the analysis because TDS is the sum of other constituents that are already included in the evaluation. Heterotrophic plate count was excluded because the accuracy of that analysis makes use of those values unsuitable for quantifying comparisons between water sources.

3.3. Assumptions

Because the pilot study threat values were determined based on conditions at the IDT site (including the site's landscape irrigation), the groundwater degradation potential evaluation assumes similar conditions as the pilot study, including the irrigation rate. Irrigation for general landscape is assumed for this evaluation. General landscaping includes turf grass and small shrubs, which are most common through the study area. The rate of irrigation at the pilot study site was 38.7 inches per year and is similar to the recommended application rate for the site (ITAP, 2006). Landscaping that requires irrigation with a different annual application rate (i.e. vegetation that have greater or lesser water needs) may change the potential to degrade groundwater. Generally, less irrigation with recycled water means less potential for groundwater degradation and more irrigation with recycled water means more potential for groundwater degradation.

3.4. Zones

Groundwater degradation potential is calculated using the inputs described above as follows:

[Groundwater Degradation Potential] = [Soil Aquifer Treatment Capacity] × [Recycled Water Quality Rating]

The net distribution of the relative rating for groundwater degradation potential for the Santa Clara and Llagas Groundwater Subbasins are shown on Figures IV-3-3 and IV-3-4. The following is a description of the relative ratings of the groundwater degradation potential.

1 to 20 – Lowest Potential

A rating of 1 to 20 denotes areas with the least potential for recycled water application to degrade groundwater relative to the range of hydrogeological conditions and recycled water qualities in the study area. The combination of the area's physical characteristics and the local recycled water source is ideal for irrigation using recycled water.

21 to 40 – Low Potential

A rating of 21 to 40 denotes areas with low potential for recycled water application to degrade groundwater relative to the range of hydrogeological conditions and recycled water qualities in the study area. These areas contain characteristics that provide reasonably good capacity for soil aquifer treatment of recycled water constituents of the given local recycled water source. The potential for recycled water to impact groundwater in these areas is comparatively low.

41 to 60 - Average Potential

A rating of 41 to 60 denotes areas with average potential for recycled water application to degrade groundwater relative to the range of hydrogeological conditions and recycled water qualities in the study area. These areas contain characteristics that may provide some capacity for soil aquifer treatment of recycled water constituents of the local source. However, there is potential for groundwater to be impacted by some recycled water constituents.

61 to 80 – High Potential

A rating of 61 to 80 denotes areas with significant potential for recycled water application to degrade groundwater relative to the range of hydrogeological conditions and recycled water qualities in the study area. These areas contain characteristics that have relatively marginal capacity for soil aquifer treatment and/or a relatively high concentration of constituents of the local recycled water. There is likelihood of one or more recycled water constituents impacting groundwater in these areas.

81 to 100 – Highest Potential

A relative rating of 81 to 100 denotes areas with the greatest potential for recycled water application to degrade groundwater relative to the range of hydrogeological conditions and recycled water qualities in the study area. These areas contain characteristics that are least ideal for soil aquifer treatment and/or likely have a high concentration of constituents of the local recycled water. Potential for recycled water constituents to impact groundwater sources is regarded as highest.

3.5. Limitations

Development of the zones for the potential to degrade groundwater is specific to current recycled water quality from the PARWQCP, SWPCP, SJ/SC WPCP, and SCRWA treatment plants. With the exception of the data collected during this study, the current recycled water quality data span from 2001 to 2007. Changes in recycled water quality, whether improved or worsened, will affect the groundwater degradation potential of recycled water application. Changes in recycled water quality can be caused by a switch to a different local recycled water source, modification of the treatment plant process, or change in quality of the received wastewater.

Threat values for this study were determined for each recycled water constituent based on available data from the bench test and pilot study. Both of those investigations had limitations in how they represent various physical conditions and long-term fate and transport of recycled water constituents. Those limitations are discussed in Volumes II and III of this report. Additional long-term monitoring under other site conditions may reveal that some constituents are more or less of a threat compared to what was concluded from the bench test and pilot study. Revisions to the threat levels would affect the overall recycled water scores and hence the groundwater degradation potential.

Development of the potential groundwater degradation zones is reliant on constituents with current and available data and information. For constituents with only a handful of sample data, the evaluation can be strengthened with ongoing monitoring for either recycled water or groundwater. Both recycled water and groundwater concentrations are used to derive the recycled water scores. In addition, there is the possibility of new contaminants which are not yet identified. As new contaminants are discovered, this analysis can be updated to reflect the groundwater degradation potential introduced by the new contaminant.

4. DISCUSSION

4.1. Soil Aquifer Treatment Capacity

Soil Aquifer Treatment (SAT) capacity maps are found in Figure IV-2-11 and IV-2-12 for the Santa Clara and Llagas Subbasin respectively. Based on a relative scale, the SAT rating in the Santa Clara Subbasin ranges from 1 to 10 (high to least capacity). In the Llagas Subbasin, the SAT rating ranges from 1 to 9.4. In both subbasins, the confined areas were determined to have relatively high capacity due to the confining layer and deep depth to groundwater. The unconfined areas were largely of good or average capacity. Only a few areas in the unconfined areas were regarded as having relatively marginal capacity and even fewer areas were regarded as least capacity. Areas with a lower rating tended to be characterized with shallow depth to water and a coarse grain size distribution in the vadose zone.

The SAT capacity map (Figure IV-2-11) shows a value of 5 for the IDT site, which indicates average SAT capacity. For comparison, direct calculation of the SAT capacity at the IDT site using site-specific data gives a rating of 2.5, indicating relatively good treatment capacity, which corresponds well with the findings from the pilot study. IDT has an approximate depth to groundwater of 35 feet (D = 7.0). The soil media and vadose zone media at IDT site is uniformly clay (S = 2, I = 2). A SAT rating of 2.5 is regarded as good capacity where the physical characteristics of the area provide good capacity for attenuation of recycled water constituents. This corresponds with the pilot study findings, which showed that there was reasonably good attenuation across depth for several constituents during the pilot study period. However, there were a few recycled water constituents that showed low concentrations in the groundwater, indicating that conditions were not ideal for recycled water application. The pilot study findings support the SAT rating, verifying the appropriateness of the methodology. The SAT values calculated using site-specific data (2.5) and the regional averaged approach (5) do not match exactly because the SAT capacity maps used basin-wide data to evaluate areas on a larger scale. The SAT capacity maps may not capture site-specific detail, however they provide a general indication of the SAT capacity for the area. These maps can be refined to reflect site-specific information as more data becomes available.

4.2. Groundwater Degradation Potential

Groundwater degradation potential maps are found in Figures IV-3-3 and IV-3-4 for the Santa Clara and Llagas Subbasin respectively. Groundwater degradation potential in the Santa Clara Subbasin is largely of lowest to average potential with a few areas regarded as high or highest. The rating in the Santa Clara Subbasin ranges from 8 to 96. Groundwater degradation potential in the Llagas Subbasin is largely of lowest to average potential and with a few areas regarded as high. The evaluation did not find any areas of the highest groundwater degradation potential in the Llagas Subbasin. In the Llagas Subbasin, the groundwater degradation potential rating ranges from 11 to 70. Comparatively, the Santa Clara and Llagas Subbasins share a similar distribution in groundwater degradation potential with a majority of lowest and low potential found in the confined areas and more average potential in the unconfined areas.

The groundwater degradation potential map (Figure IV-3-3) shows a value of 48.9 for the IDT site, which indicates average groundwater degradation potential. For comparison, direct calculation of the groundwater degradation potential at the IDT site using site-specific data gives a rating of 24, which indicates low groundwater degradation potential and corresponds well with the findings from the pilot study. At the IDT site, the SAT capacity rating is calculated as 2.5 using site-specific data, indicating relatively good capacity. At the IDT site, the recycled water was derived from the SJ/SC WPCP which was determined to have a recycled water quality rating of 9.62. A groundwater degradation potential of 24 is regarded as low potential, but some potential exists for groundwater degradation. The rating agrees with the results of the pilot study. For the given recycled water quality from the SJ/SC WPCP, there was a significant number of constituents that appeared to exhibit removal with depth. However, a few constituents were observed in groundwater, indicating some potential to degrade groundwater long-term (18 months). Overall, the pilot study agrees with the rating of the groundwater degradation potential, verifying the appropriateness of the methodology. While the pilot study is complete, groundwater sampling at the pilot study site is ongoing. The evaluation made in this volume can be updated as ongoing monitoring yields new data.

Similar to SAT, the GWDP values calculated using site-specific data (24) and the regional averaged approach (48.9) do not match exactly.. The GWDP maps used basin-wide data to evaluate areas on a larger scale. The GWDP maps may not capture site-specific detail, however they provide a general indication of the GWDP for the area. As with the SAT maps, the GWDP maps can be refined to reflect site-specific information as more data becomes available.

4.3. Comparison to the Groundwater Vulnerability Study

While the goals of the Groundwater Vulnerability Study (SCVWD, 2010) and this study are uniquely different, there is some similarity in the approach and the input parameters. The vulnerability study examined the Santa Clara, Coyote, and Llagas Subbasins with the goal of evaluating the sensitivity and vulnerability of the groundwater. In the vulnerability study, groundwater sensitivity is defined as the relative ease with which a contaminant on or near the land surface can migrate to the aquifer of interest. Sensitivity is a function of the aquifer properties (i.e. hydraulic conductivity, porosity, and hydraulic gradient) and the associated sources of water and stresses to the groundwater system (i.e. recharge, travel through the unsaturated zone, and well pumping). Contrasting to the vulnerability study, the soil aquifer treatment capacity and groundwater degradation potential were evaluated in the context of expanding the use of recycled water for irrigation in the study area. The study looked specifically at constituents that are found in recycled water and irrigation was the main driver of vadose zone percolation.

The most similar evaluation to the SAT capacity is the sensitivity assessment from the vulnerability study. Input parameters for the sensitivity assessment included (1) soil media characteristics in the vadose zone, (2) groundwater recharge, (3) depth to top of the aquifer, and (4) annual groundwater production. The SAT capacity assessment presented in this report did not include groundwater recharge or annual groundwater production. Groundwater recharge was omitted in the SAT capacity assessment because for the purpose of determining SAT capacity with respect to recycled water use, the main contributor to groundwater recharge is irrigation of recycled water. In the vulnerability study, the groundwater recharge component included both managed recharge and precipitation. Annual groundwater production was not evaluated for SAT capacity because the value is intended to represent attenuation within the vadose zone, as opposed to within the vadose zone and aquifer.

For the sensitivity of the principal aquifer, the Groundwater Vulnerability Study determined that the sensitivity was nine and ten (high) in the majority of the Llagas Subbasin. In the Santa Clara Subbasin, the sensitivity ranged from one (low) to nine. The northern most section of the subbasin was regarded as low sensitivity. The most sensitive areas within the Santa Clara Subbasin are the western side of the confined area and portions of the unconfined areas. Comparing the two subbasins, the vulnerability study determined that the Llagas Subbasin was more sensitive than the Santa Clara Subbasin. The soil aquifer treatment map indicates the highest capacity for SAT in the confined areas in both subbasins. The Llagas subbasin generally did not have less SAT capacity than the Santa Clara Subbasin. Variation between the maps from the two studies may be attributed to the differences in the input parameters (i.e. groundwater recharge and groundwater production) used and the difference in the goal of the respective study. The Groundwater Vulnerability Study assessed general groundwater sensitivity to contaminants while the goal of this study is to assess the degradation potential of groundwater specifically from recycled water use as an irrigation source.

5. CONCLUSION

Using a developed and calibrated methodology, and data collected from previous phases of the study, values of soil aquifer treatment capacity and groundwater degradation potential were calculated for the entire study area.

Soil aquifer treatment in the Santa Clara and Llagas Subbasin ranged from least to high capacity. Areas with the highest relative SAT capacity were found to be in the confined areas in the Santa Clara Subbasin and in the Llagas Subbasin. The confining layer and deep depth to groundwater are characteristics of the best areas within the study area for soil aquifer treatment capacity.

Groundwater degradation potential in the Santa Clara and Llagas Subbasin ranged from lowest to highest potential. Groundwater degradation potential was found to be generally low or lowest in the confined areas. Groundwater degradation potential in the unconfined areas was found to be generally average with some areas regarded as high or highest.

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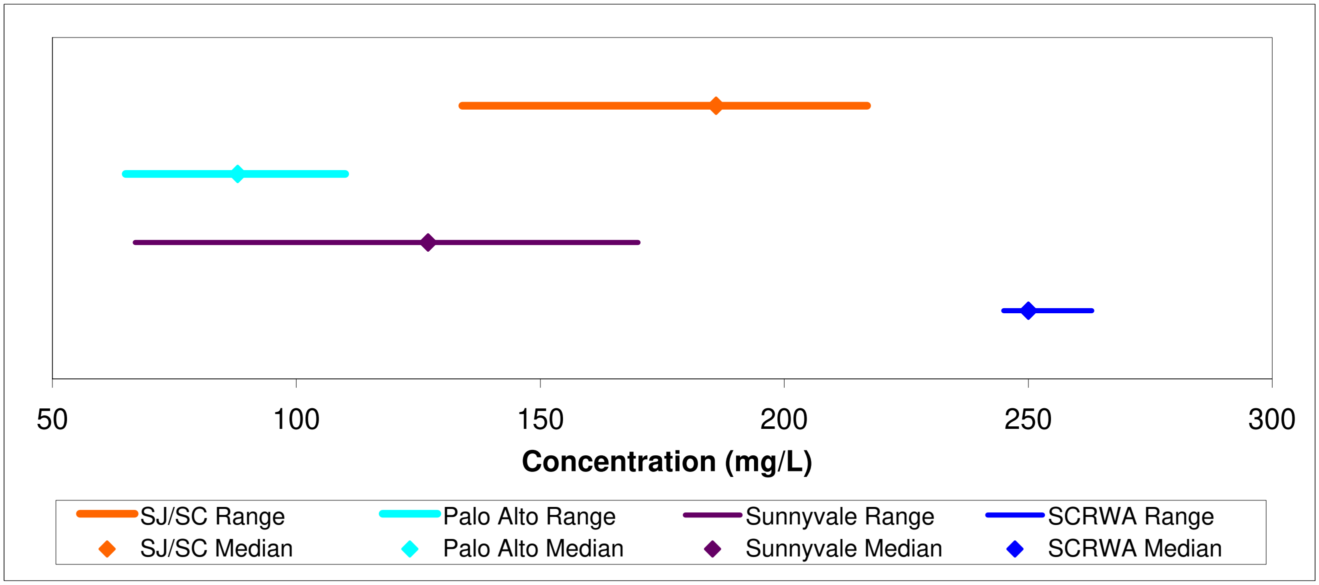
APPENDIX IV-A

RECLAIMED WATER CHEMISTRY, SUMMARY STATISTICS

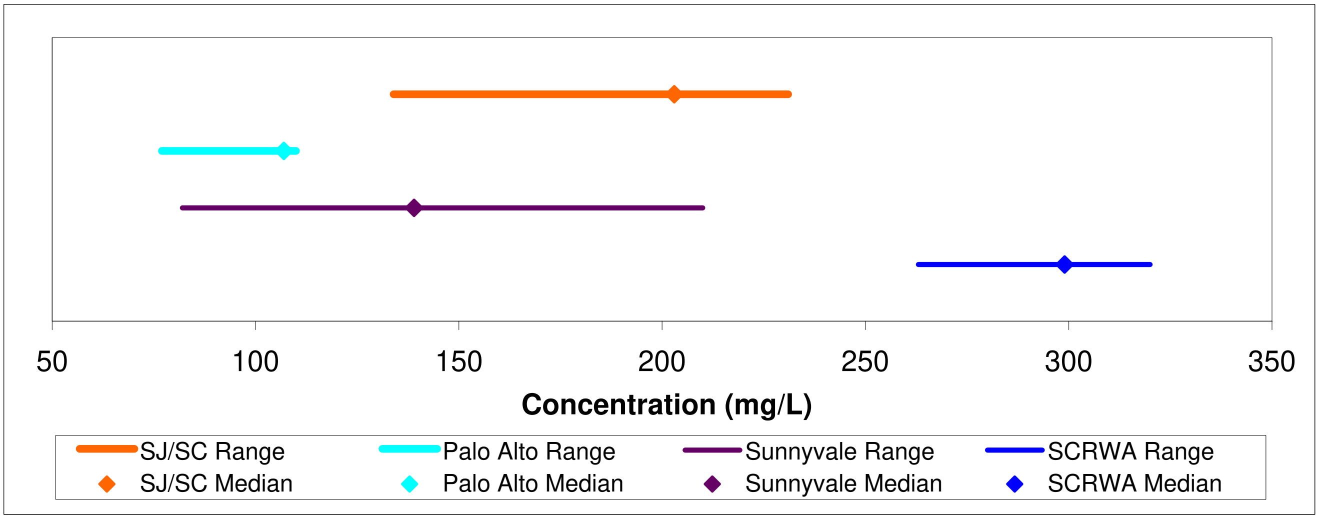
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Alkalinity, Total



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 134	Minimum: 65	Minimum: 67	Minimum: 245
Maximum: 217	Maximum: 110	Maximum: 170	Maximum: 263
Median: 186	Median: 88	Median: 127	Median: 250
Mean: 180	Mean: 88	Mean: 124	Mean: 254
Count: 7	Count: 3	Count: 6	Count: 5
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

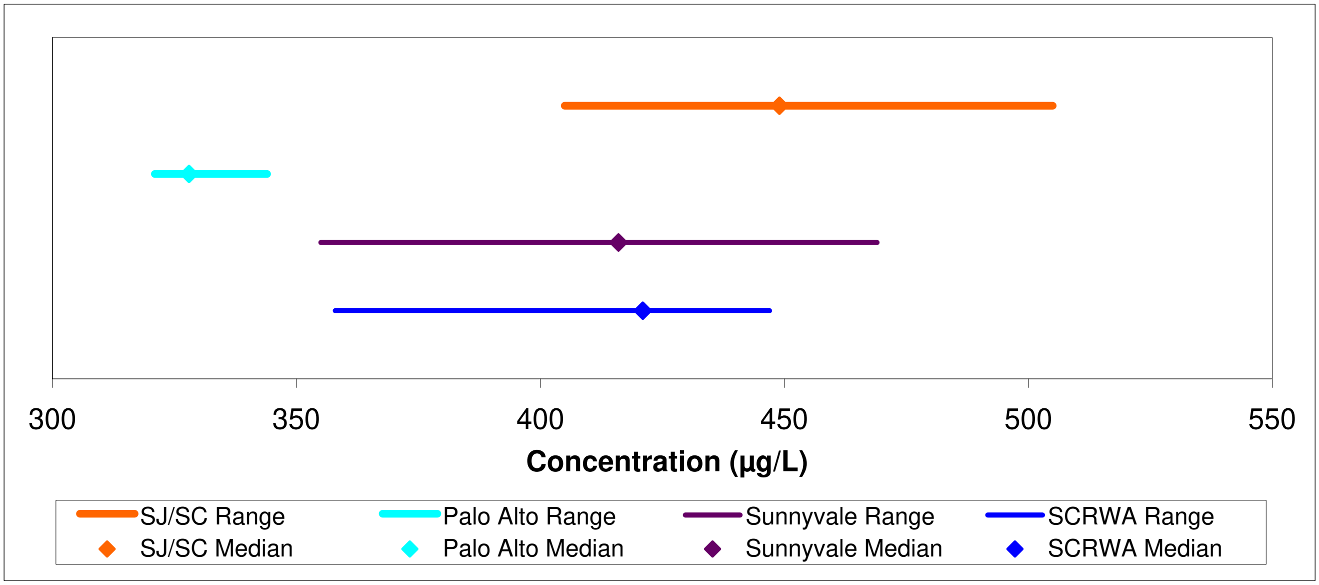
Bicarbonate Alkalinity



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 134	Minimum: 77	Minimum: 82	Minimum: 263
Maximum: 231	Maximum: 110	Maximum: 210	Maximum: 320
Median: 203	Median: 107	Median: 139	Median: 299
Mean: 196	Mean: 98	Mean: 142	Mean: 296
Count: 11	Count: 3	Count: 9	Count: 5
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

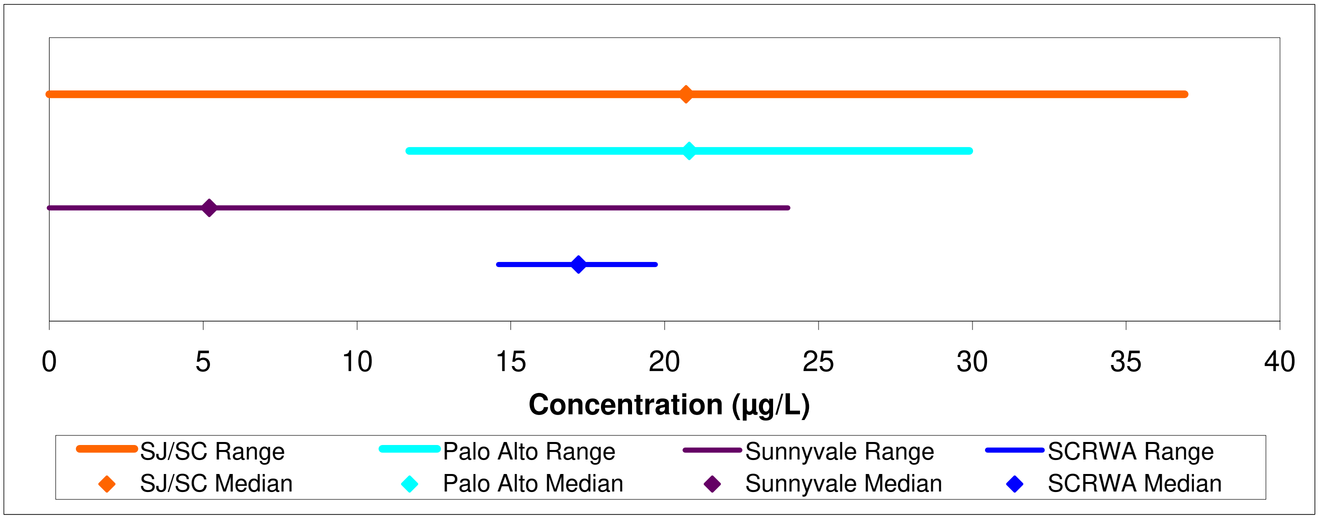
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Boron



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 405	Minimum: 321	Minimum: 355	Minimum: 358
Maximum: 505	Maximum: 344	Maximum: 469	Maximum: 447
Median: 449	Median: 328	Median: 416	Median: 421
Mean: 457	Mean: 331	Mean: 409	Mean: 406
Count: 5	Count: 3	Count: 5	Count: 5
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

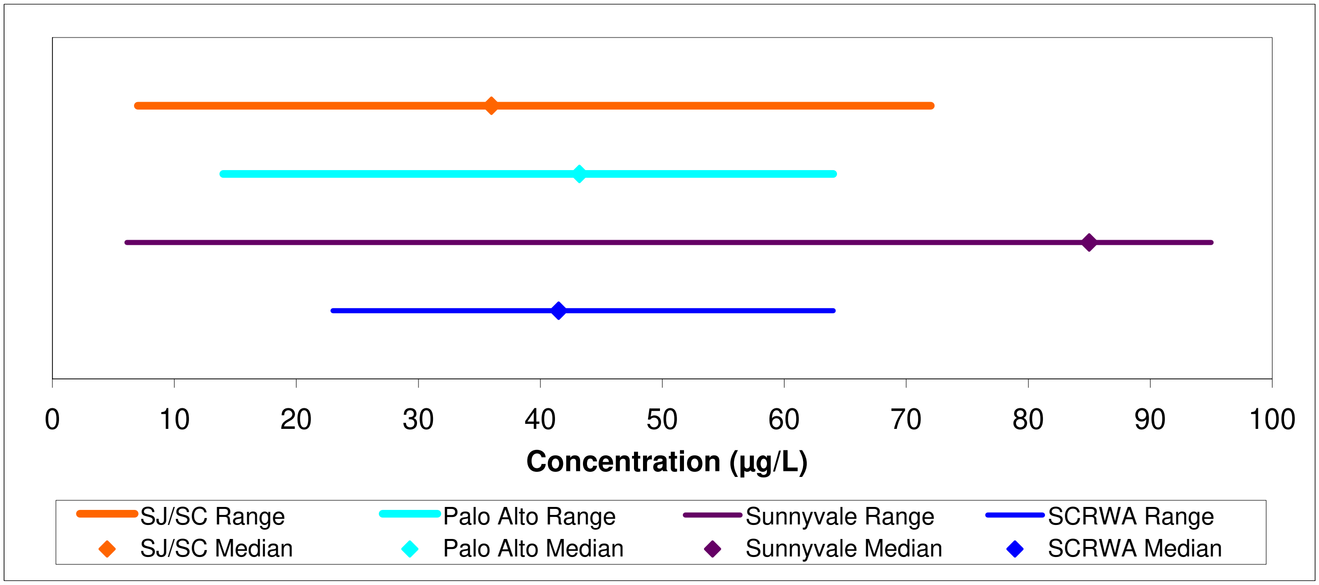
Bromochloroacetic Acid



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 11.7	Minimum: 0	Minimum: 14.6
Maximum: 36.9	Maximum: 29.9	Maximum: 24	Maximum: 19.7
Median: 20.7	Median: 20.8	Median: 5.2	Median: 17.2
Mean: 17.5	Mean: 20.8	Mean: 8.6	Mean: 17.2
Count: 5	Count: 2	Count: 4	Count: 2
Detect Frequency: 60%	Detect Frequency: 100%	Detect Frequency: 75%	Detect Frequency: 100%

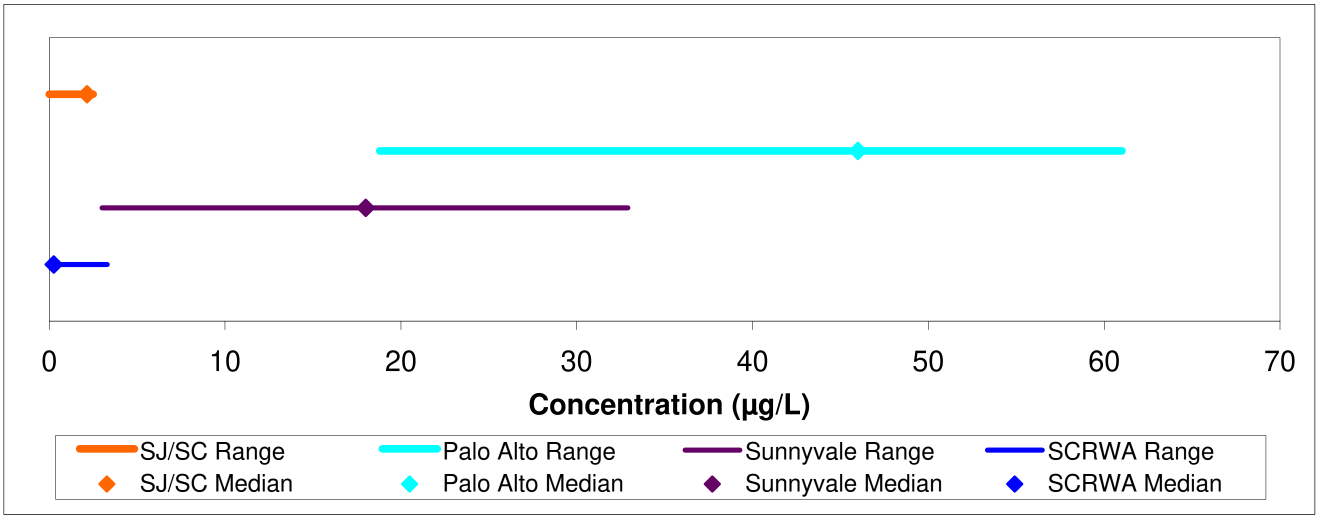
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Bromodichloromethane



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 7	Minimum: 14	Minimum: 6.1	Minimum: 23
Maximum: 72	Maximum: 64	Maximum: 95	Maximum: 64
Median: 36	Median: 43.2	Median: 85	Median: 41.5
Mean: 35.2	Mean: 41.1	Mean: 67.2	Mean: 41.9
Count: 5	Count: 4	Count: 5	Count: 6
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

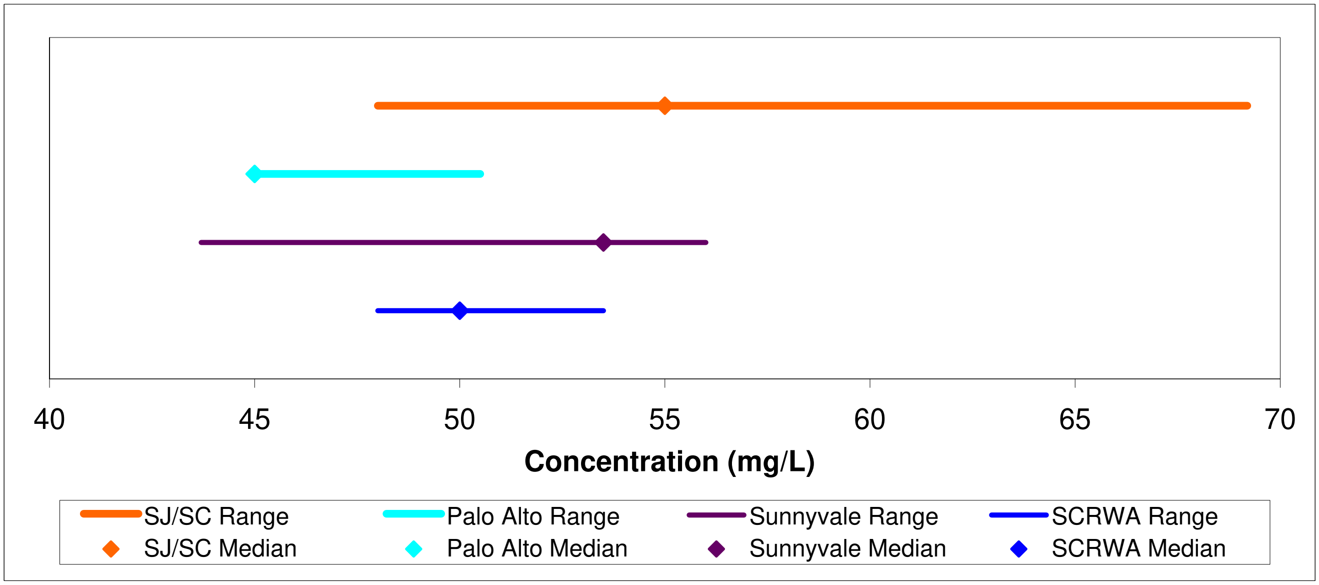
Bromoform



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 18.8	Minimum: 3	Minimum: 0
Maximum: 2.5	Maximum: 61	Maximum: 32.9	Maximum: 3.3
Median: 2.15	Median: 46	Median: 18	Median: 0.25
Mean: 1.7	Mean: 43	Mean: 17.4	Mean: 0.93
Count: 4	Count: 4	Count: 5	Count: 6
Detect Frequency: 75%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 50%

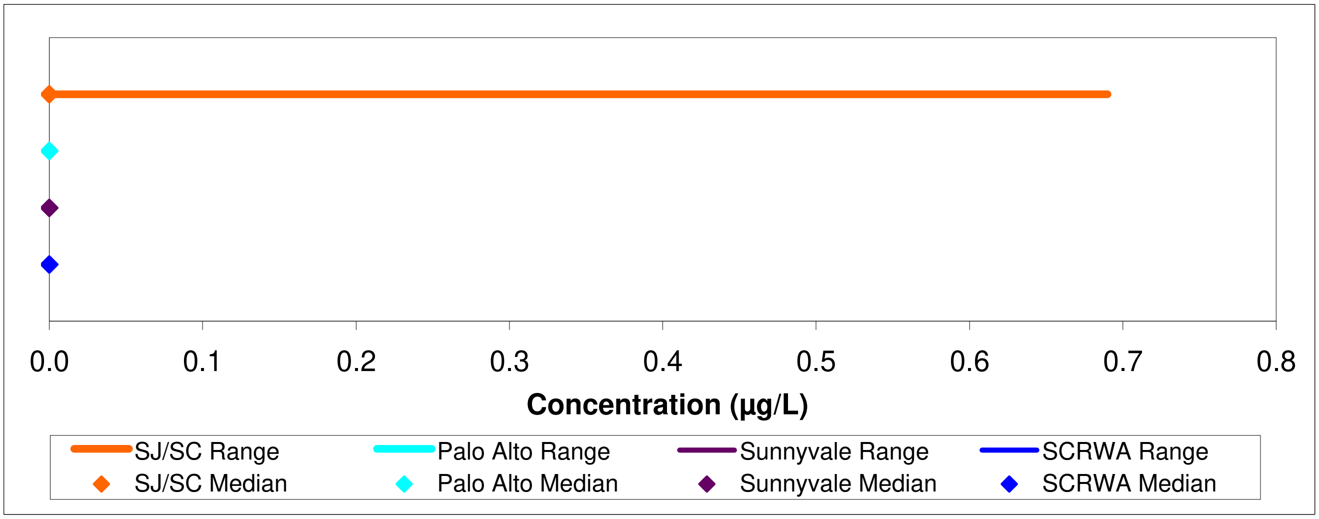
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Calcium



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 48	Minimum: 45	Minimum: 43.7	Minimum: 48
Maximum: 69.2	Maximum: 50.5	Maximum: 56	Maximum: 53.5
Median: 55	Median: 45	Median: 53.5	Median: 50
Mean: 55.4	Mean: 46.8	Mean: 52	Mean: 50.6
Count: 6	Count: 3	Count: 6	Count: 5
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

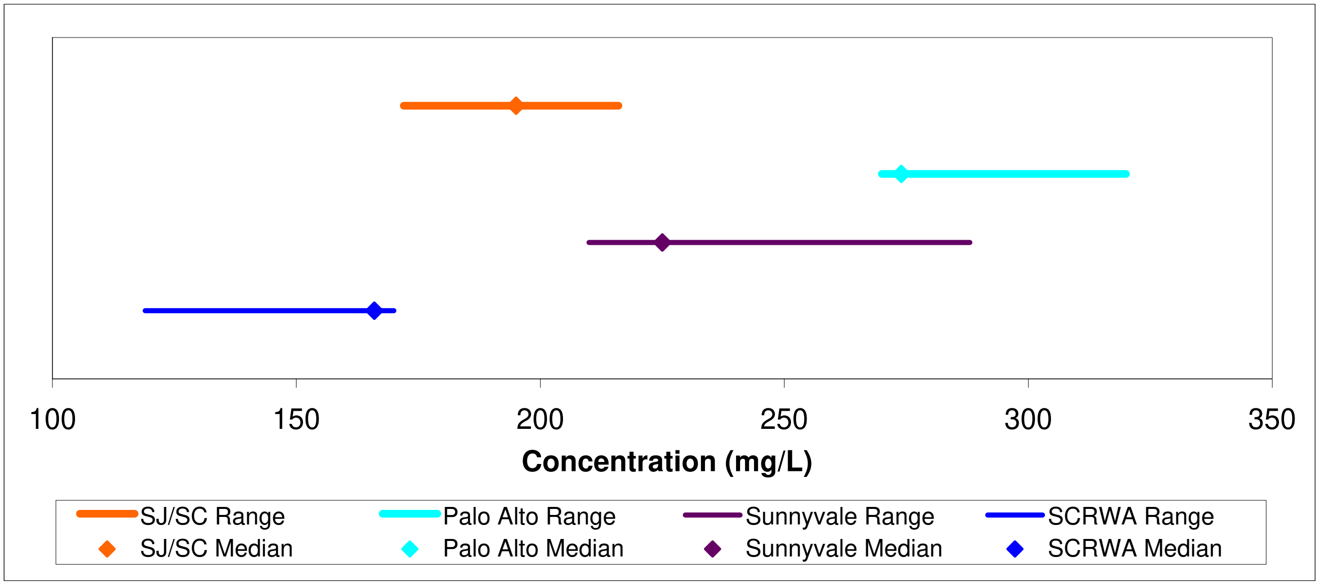
Carbon Tetrachloride



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 0	Minimum: 0	Minimum: 0
Maximum: 0.69	Maximum: 0	Maximum: 0	Maximum: 0
Median: 0	Median: 0	Median: 0	Median: 0
Mean: 0.17	Mean: 0	Mean: 0	Mean: 0
Count: 4	Count: 4	Count: 5	Count: 4
Detect Frequency: 25%	Detect Frequency: 0%	Detect Frequency: 0%	Detect Frequency: 0%

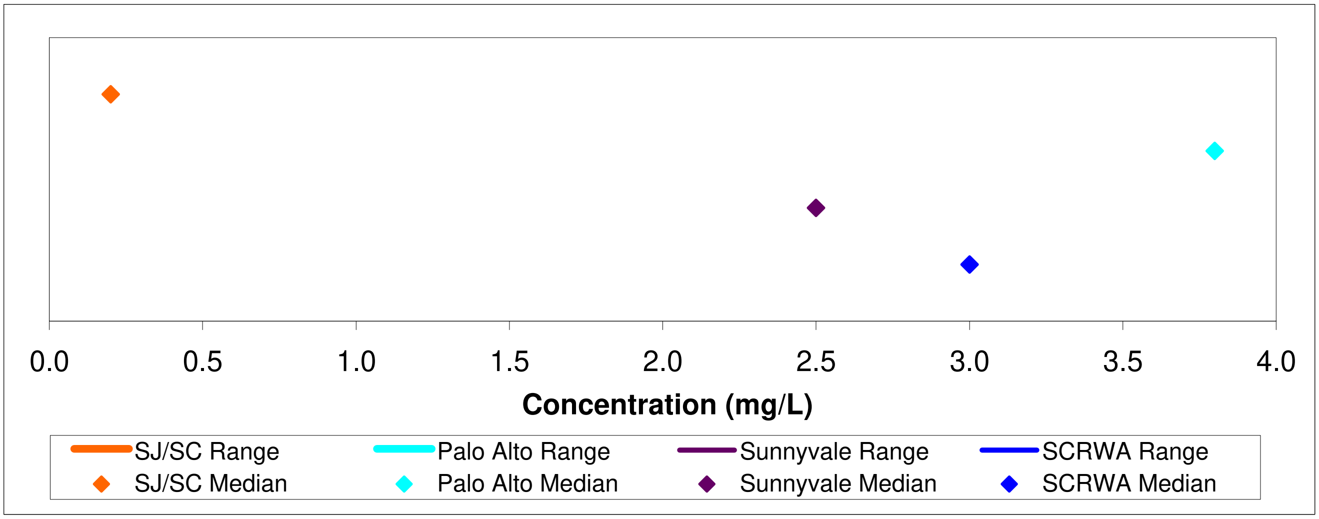
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Chloride



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 172	Minimum: 270	Minimum: 210	Minimum: 119
Maximum: 216	Maximum: 320	Maximum: 288	Maximum: 170
Median: 195	Median: 274	Median: 225	Median: 166
Mean: 192	Mean: 288	Mean: 238	Mean: 155
Count: 6	Count: 3	Count: 5	Count: 5
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

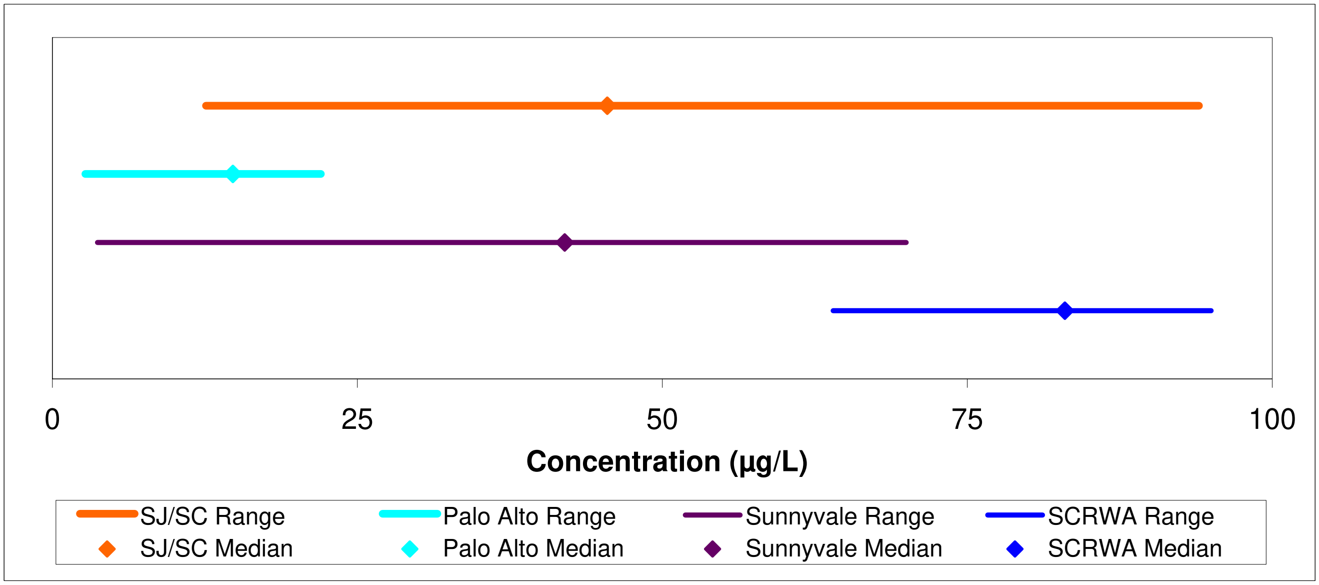
Chlorine, Total



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0.2	Minimum: 3.8	Minimum: 2.5	Minimum: 3
Maximum: 0.2	Maximum: 3.8	Maximum: 2.5	Maximum: 3
Median: 0.2	Median: 3.8	Median: 2.5	Median: 3
Mean: 0.2	Mean: 3.8	Mean: 2.5	Mean: 3
Count: 1	Count: 1	Count: 1	Count: 1
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Chloroform



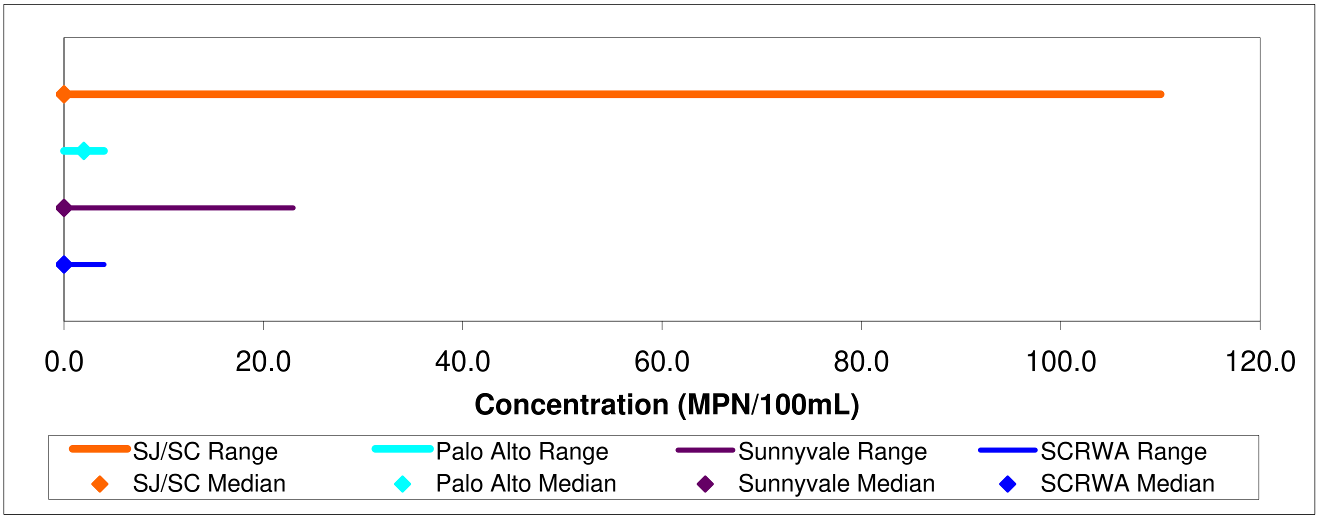
San Jose/Santa Clara
Minimum: 12.6
Maximum: 94
Median: 45.5
Mean: 49.4
Count: 4
Detect Frequency: 100%

Palo Alto
Minimum: 2.7
Maximum: 22
Median: 14.8
Mean: 13.6
Count: 4
Detect Frequency: 100%

Sunnyvale
Minimum: 3.7
Maximum: 70
Median: 42
Mean: 42.5
Count: 5
Detect Frequency: 100%

SCRWA
Minimum: 64
Maximum: 95
Median: 83
Mean: 81.6
Count: 6
Detect Frequency: 100%

Coliforms, Total



San Jose/Santa Clara
Minimum: 0
Maximum: 110
Median: 0
Mean: 22.4
Count: 5
Detect Frequency: 40%

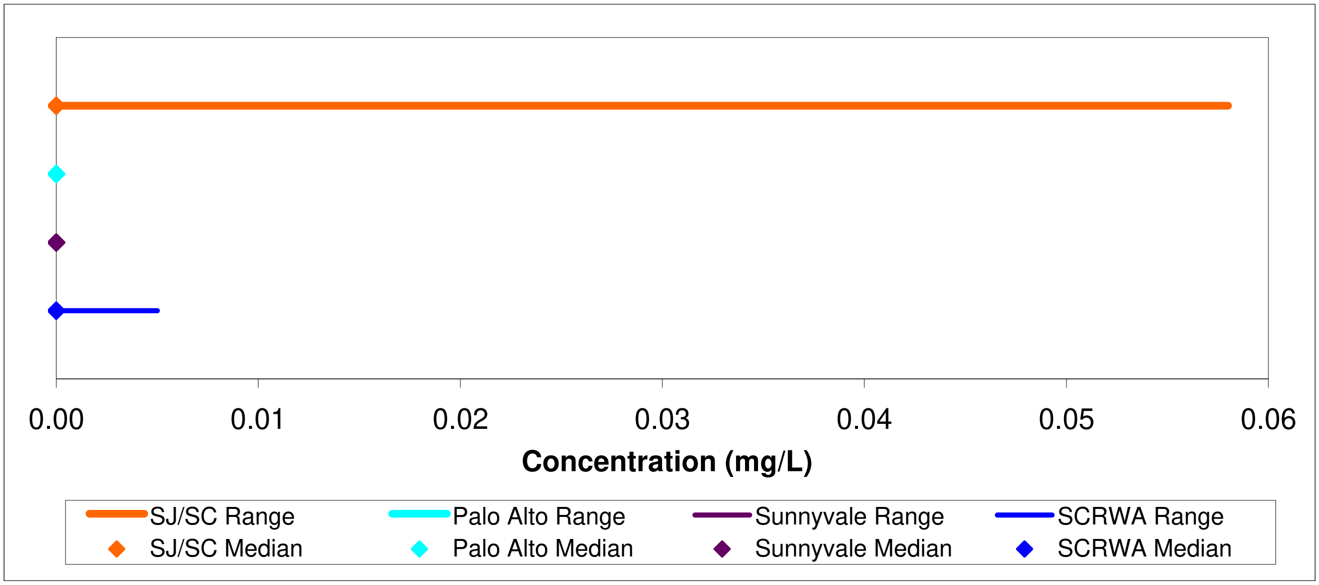
Palo Alto
Minimum: 0
Maximum: 4
Median: 2
Mean: 2
Count: 3
Detect Frequency: 67%

Sunnyvale
Minimum: 0
Maximum: 23
Median: 0
Mean: 4.6
Count: 5
Detect Frequency: 20%

SCRWA
Minimum: 0
Maximum: 4
Median: 0
Mean: 0.8
Count: 5
Detect Frequency: 20%

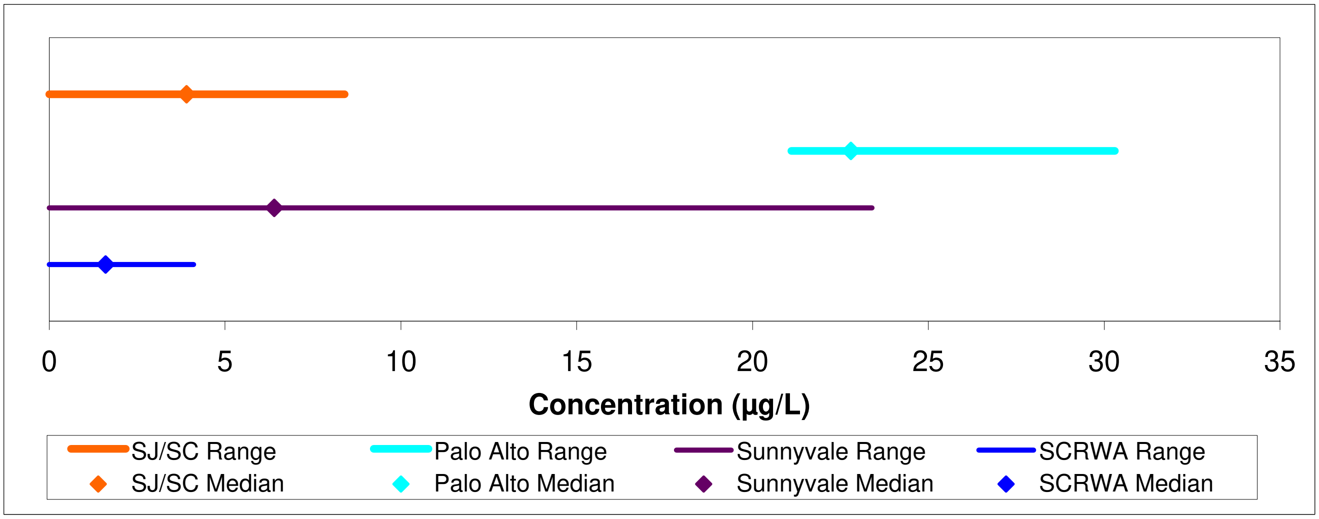
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Cyanide



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 0	Minimum: 0	Minimum: 0
Maximum: 0.058	Maximum: 0	Maximum: 0	Maximum: 0.005
Median: 0	Median: 0	Median: 0	Median: 0
Mean: 0.0145	Mean: 0	Mean: 0	Mean: 0.00125
Count: 4	Count: 2	Count: 4	Count: 4
Detect Frequency: 25%	Detect Frequency: 0%	Detect Frequency: 0%	Detect Frequency: 25%

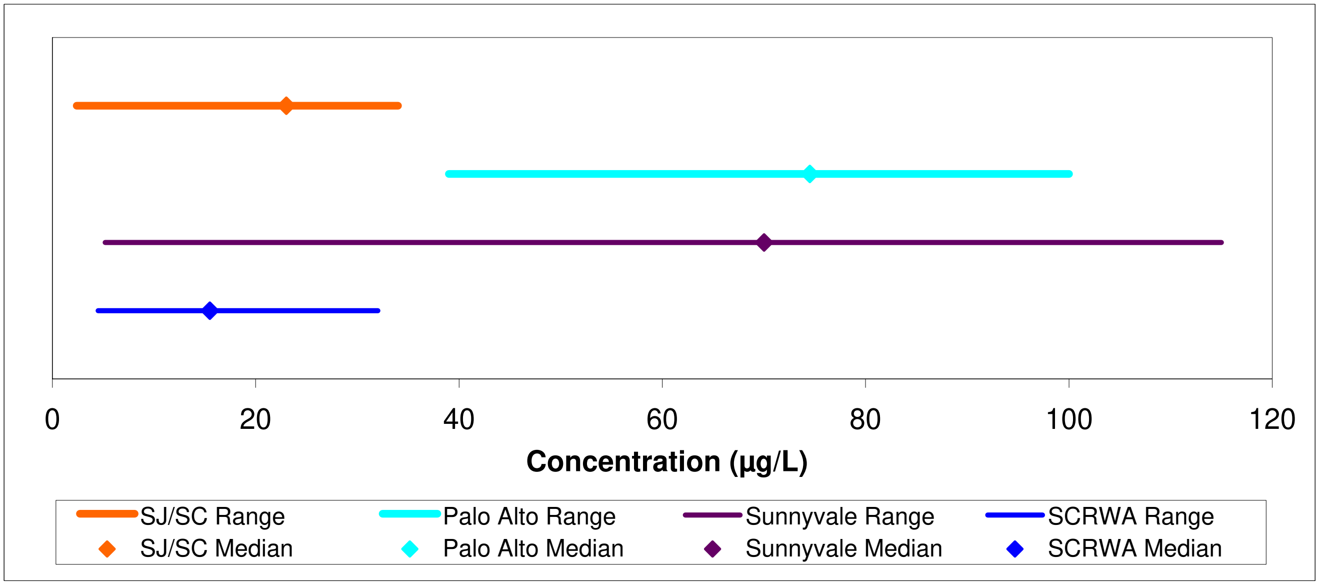
Dibromoacetic Acid



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 21.1	Minimum: 0	Minimum: 0
Maximum: 8.4	Maximum: 30.3	Maximum: 23.4	Maximum: 4.1
Median: 3.9	Median: 22.8	Median: 6.4	Median: 1.6
Mean: 4.17	Mean: 24.7	Mean: 9.18	Mean: 1.9
Count: 6	Count: 3	Count: 5	Count: 3
Detect Frequency: 83%	Detect Frequency: 100%	Detect Frequency: 80%	Detect Frequency: 67%

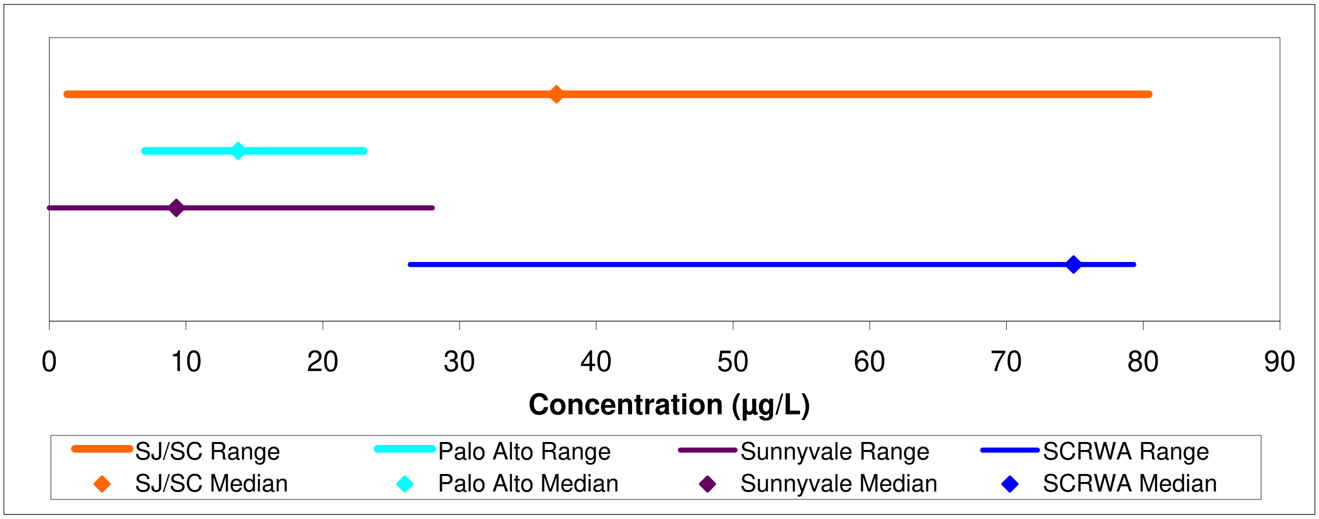
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Dibromochloromethane



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 2.4	Minimum: 39	Minimum: 5.2	Minimum: 4.5
Maximum: 34	Maximum: 100	Maximum: 115	Maximum: 32
Median: 23	Median: 74.5	Median: 70	Median: 15.5
Mean: 20.6	Mean: 72	Mean: 69	Mean: 15.2
Count: 4	Count: 4	Count: 5	Count: 6
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

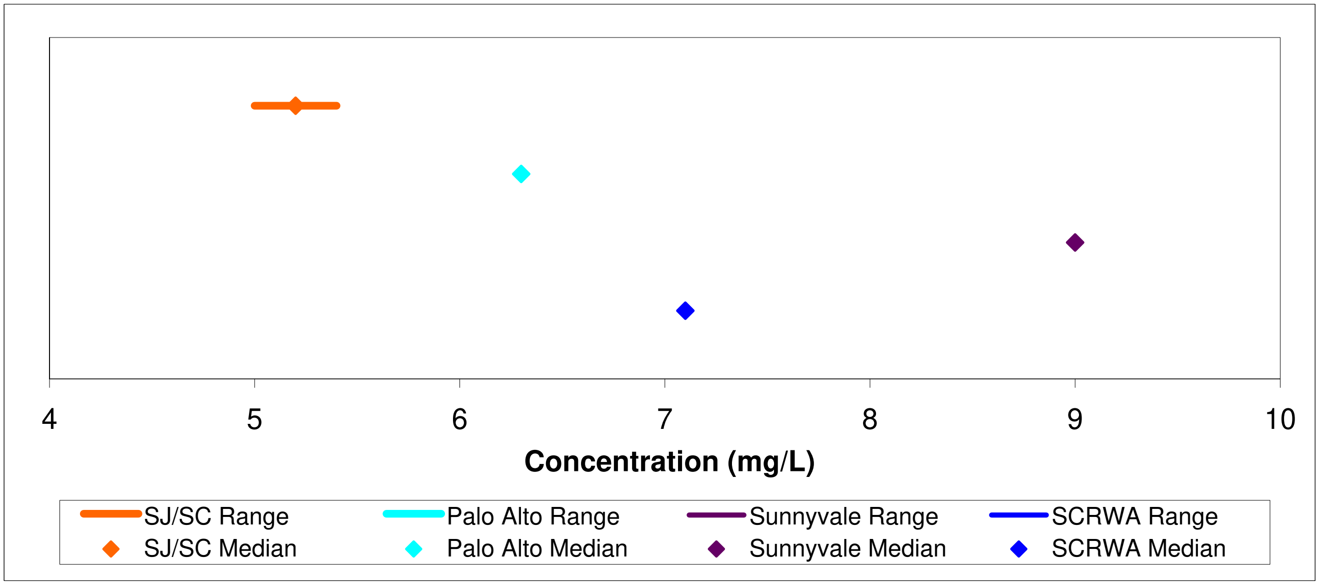
Dichloroacetic Acid



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 1.3	Minimum: 7	Minimum: 0	Minimum: 26.4
Maximum: 80.4	Maximum: 23	Maximum: 28	Maximum: 79.3
Median: 37.1	Median: 13.8	Median: 9.3	Median: 74.9
Mean: 39.5	Mean: 14.6	Mean: 12.1	Mean: 60.2
Count: 6	Count: 3	Count: 5	Count: 3
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 80%	Detect Frequency: 100%

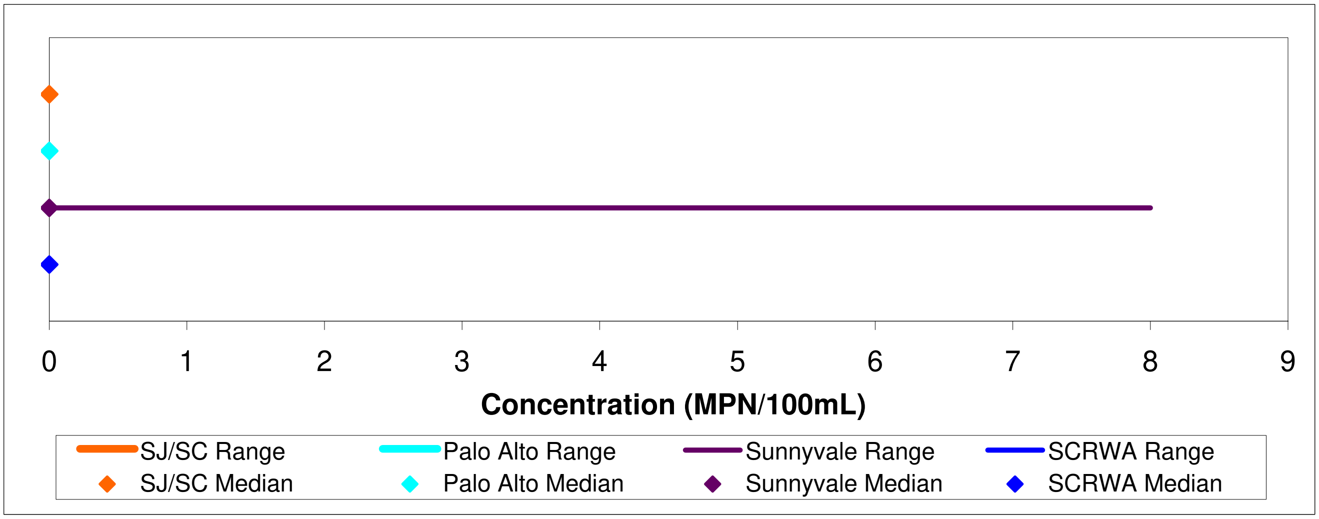
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Dissolved Organic Carbon



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 5	Minimum: 6.3	Minimum: 9	Minimum: 7.1
Maximum: 5.4	Maximum: 6.3	Maximum: 9	Maximum: 7.1
Median: 5.2	Median: 6.3	Median: 9	Median: 7.1
Mean: 5.2	Mean: 6.3	Mean: 9	Mean: 7.1
Count: 2	Count: 1	Count: 1	Count: 1
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

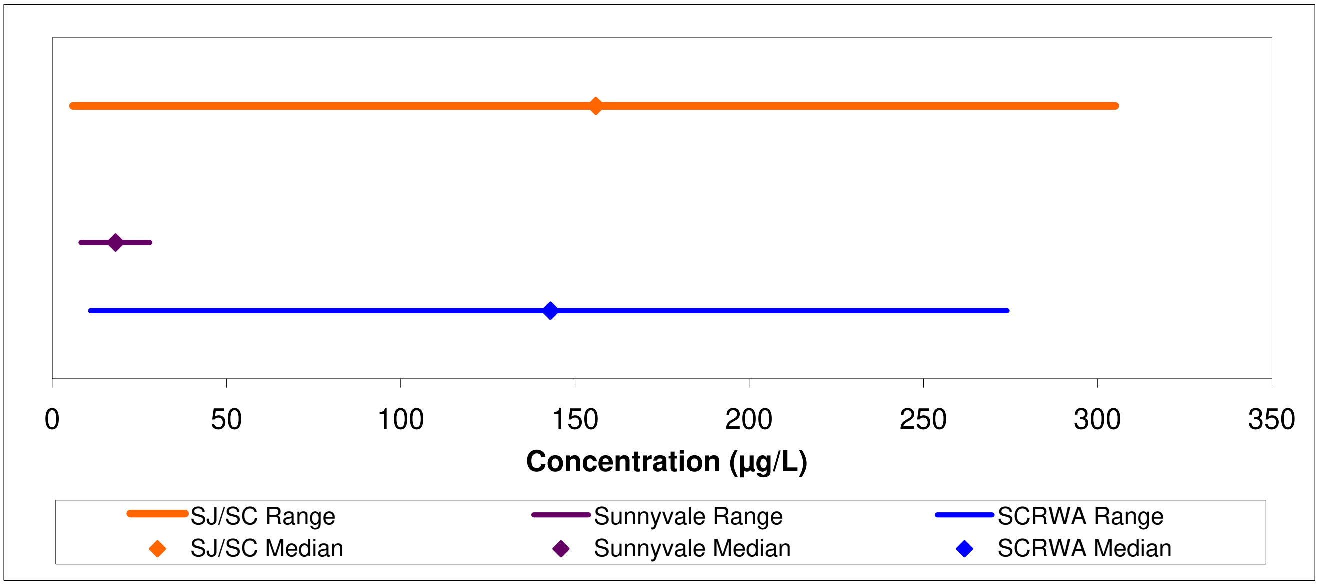
E. Coli



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 0	Minimum: 0	Minimum: 0
Maximum: 0	Maximum: 0	Maximum: 8	Maximum: 0
Median: 0	Median: 0	Median: 0	Median: 0
Mean: 0	Mean: 0	Mean: 1.6	Mean: 0
Count: 5	Count: 3	Count: 5	Count: 5
Detect Frequency: 0%	Detect Frequency: 0%	Detect Frequency: 20%	Detect Frequency: 0%

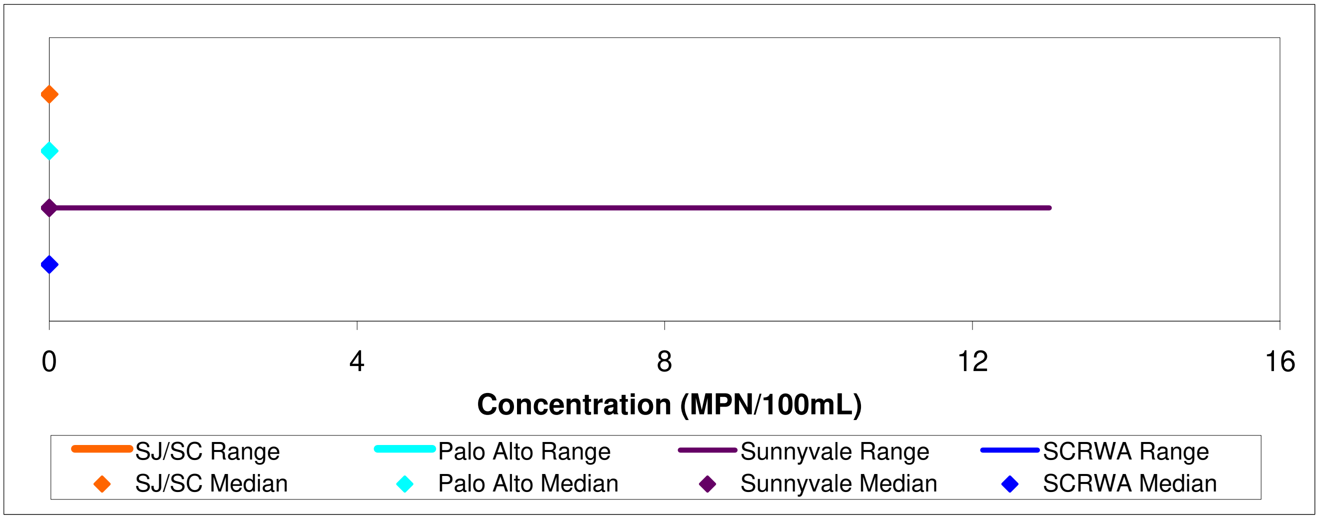
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Ethylenediaminetetraacetic acid (EDTA)



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 6	No data available.	Minimum: 8.3	Minimum: 11
Maximum: 305		Maximum: 28	Maximum: 274
Median: 156		Median: 18.2	Median: 143
Mean: 156		Mean: 18.2	Mean: 143
Count: 2		Count: 2	Count: 2
Detect Frequency: 100%		Detect Frequency: 100%	Detect Frequency: 100%

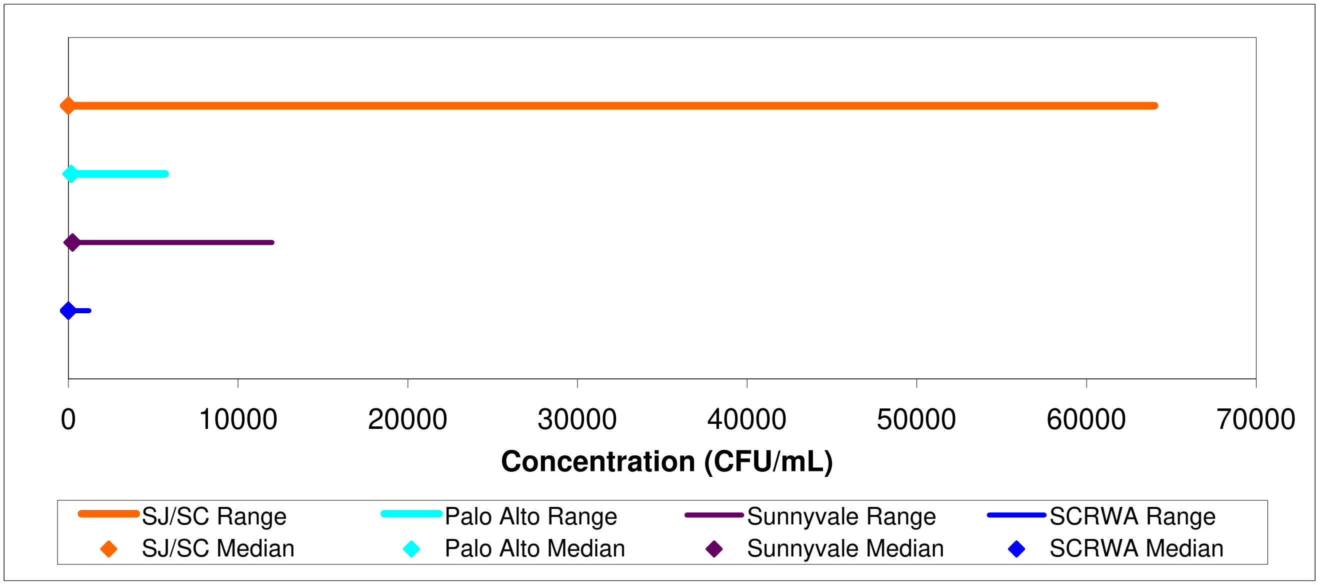
Fecal Coliforms



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 0	Minimum: 0	Minimum: 0
Maximum: 0	Maximum: 0	Maximum: 13	Maximum: 0
Median: 0	Median: 0	Median: 0	Median: 0
Mean: 0	Mean: 0	Mean: 2.6	Mean: 0
Count: 5	Count: 3	Count: 5	Count: 5
Detect Frequency: 0%	Detect Frequency: 0%	Detect Frequency: 20%	Detect Frequency: 0%

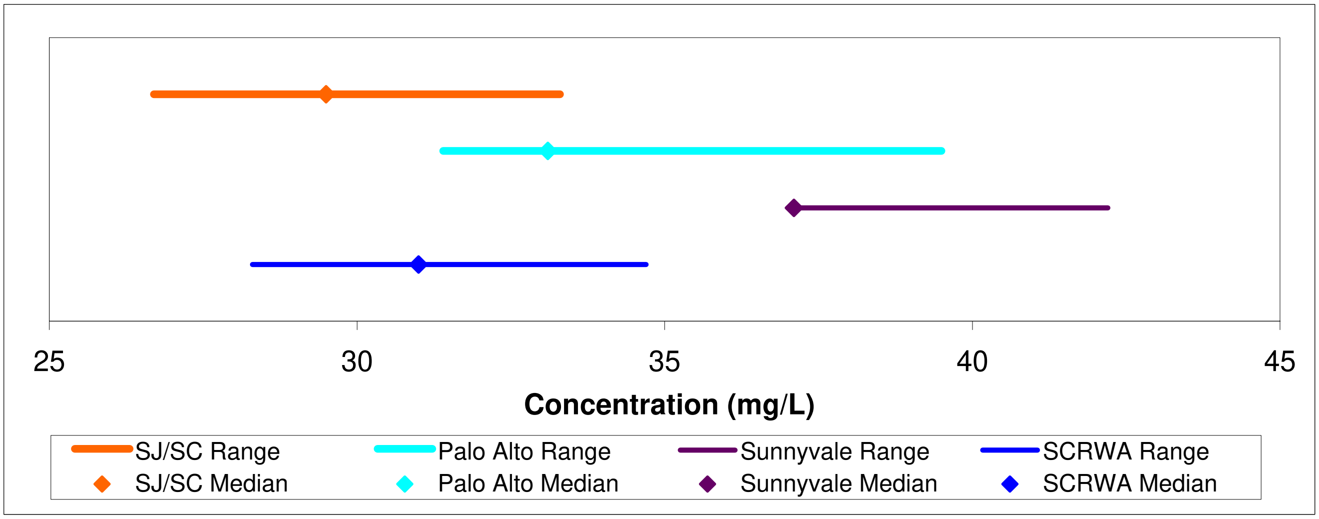
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Heterotrophic Plate Count



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 2	Minimum: 19	Minimum: 0
Maximum: 64000	Maximum: 5700	Maximum: 12000	Maximum: 1200
Median: 2	Median: 170	Median: 250	Median: 3
Mean: 12890	Mean: 1957	Mean: 2827	Mean: 283
Count: 5	Count: 3	Count: 5	Count: 5
Detect Frequency: 60%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 80%

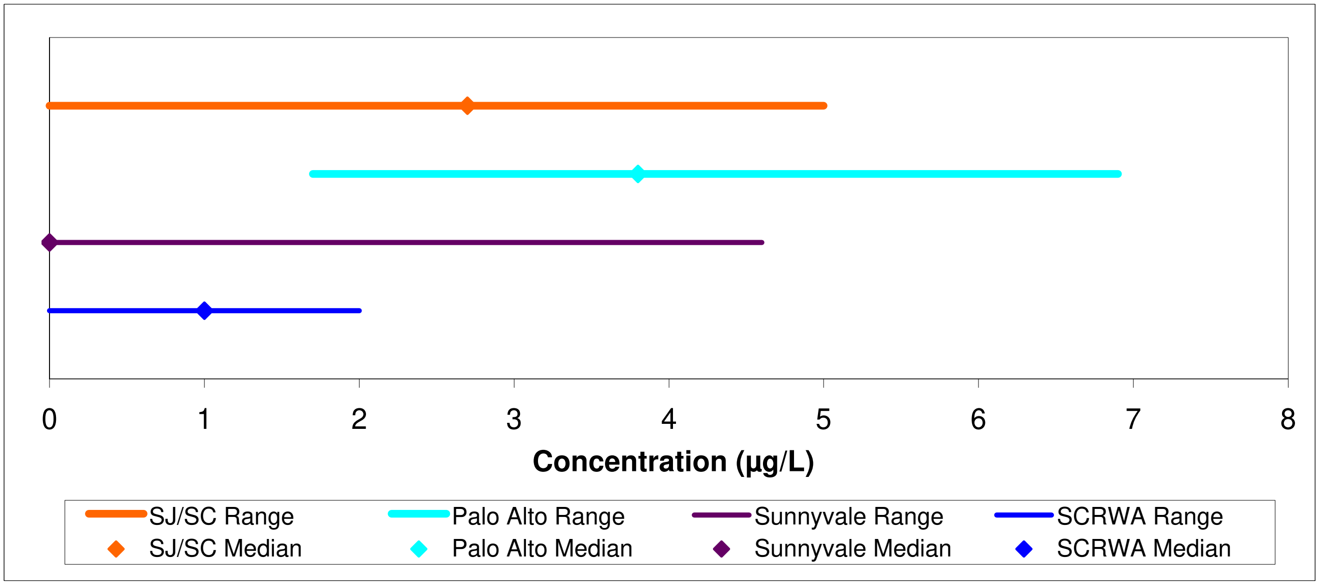
Magnesium



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 26.7	Minimum: 31.4	Minimum: 37	Minimum: 28.3
Maximum: 33.3	Maximum: 39.5	Maximum: 42.2	Maximum: 34.7
Median: 29.5	Median: 33.1	Median: 37.1	Median: 31
Mean: 29.3	Mean: 34.7	Mean: 38.4	Mean: 31
Count: 5	Count: 3	Count: 5	Count: 5
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Monobromoacetic Acid



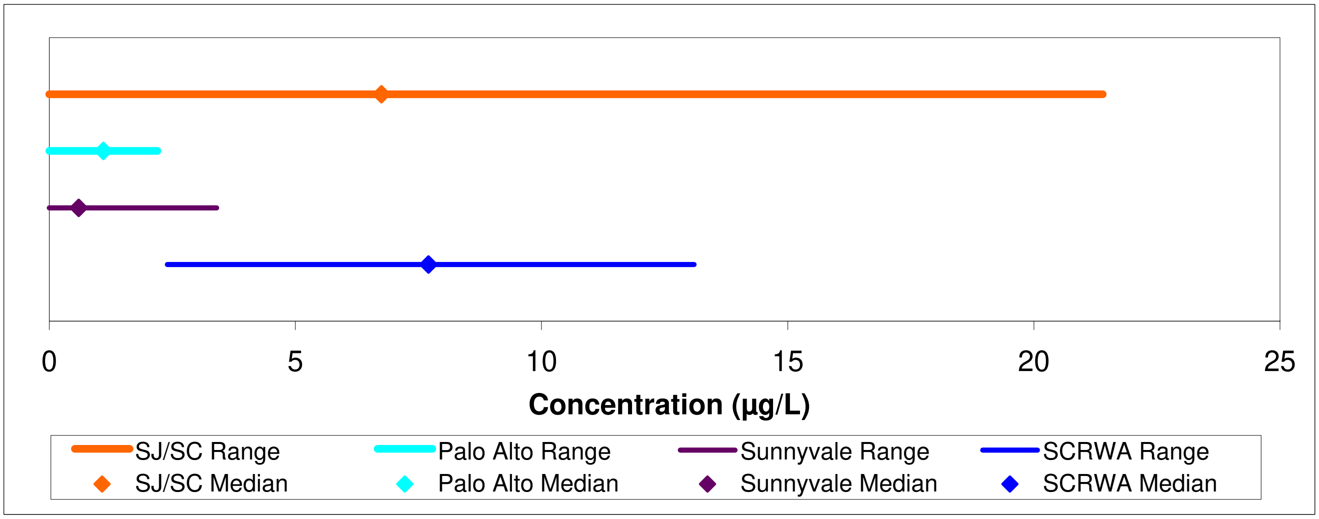
San Jose/Santa Clara
Minimum: 0
Maximum: 5
Median: 2.7
Mean: 2.5
Count: 6
Detect Frequency: 67%

Palo Alto
Minimum: 1.7
Maximum: 6.9
Median: 3.8
Mean: 4.13
Count: 3
Detect Frequency: 100%

Sunnyvale
Minimum: 0
Maximum: 4.6
Median: 0
Mean: 1.24
Count: 5
Detect Frequency: 40%

SCRWA
Minimum: 0
Maximum: 2
Median: 1
Mean: 1
Count: 4
Detect Frequency: 50%

Monochloroacetic Acid



San Jose/Santa Clara
Minimum: 0
Maximum: 21.4
Median: 6.75
Mean: 8.83
Count: 6
Detect Frequency: 67%

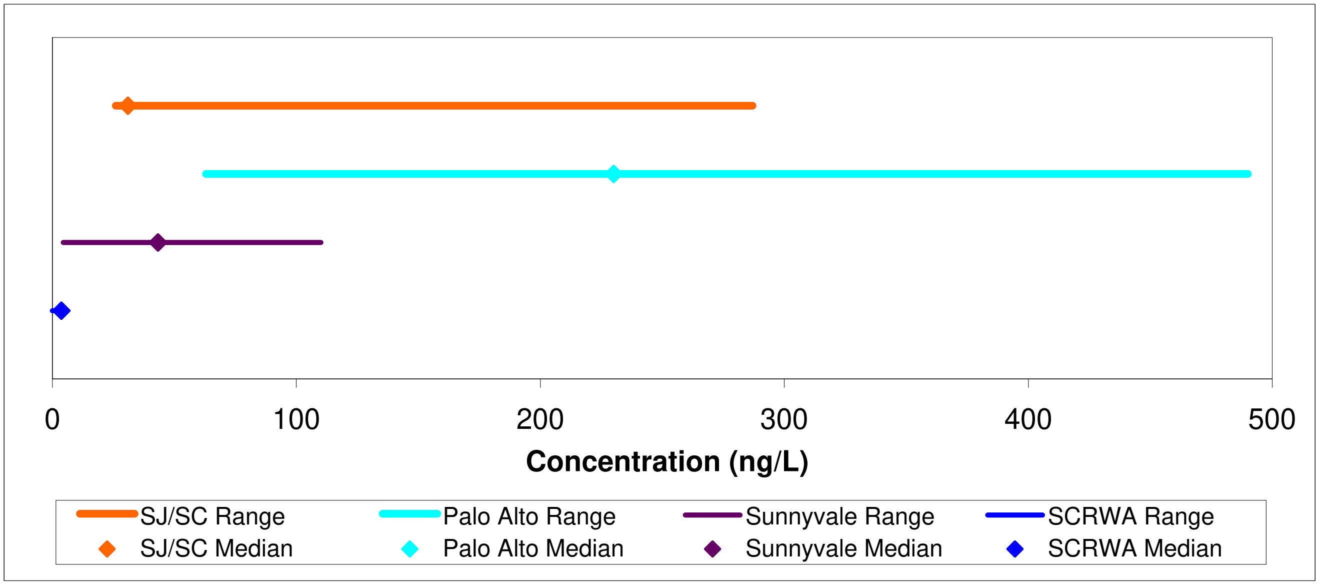
Palo Alto
Minimum: 0
Maximum: 2.2
Median: 1.1
Mean: 1.1
Count: 2
Detect Frequency: 50%

Sunnyvale
Minimum: 0
Maximum: 3.4
Median: 0.6
Mean: 1.15
Count: 4
Detect Frequency: 50%

SCRWA
Minimum: 2.4
Maximum: 13.1
Median: 7.7
Mean: 7.73
Count: 3
Detect Frequency: 100%

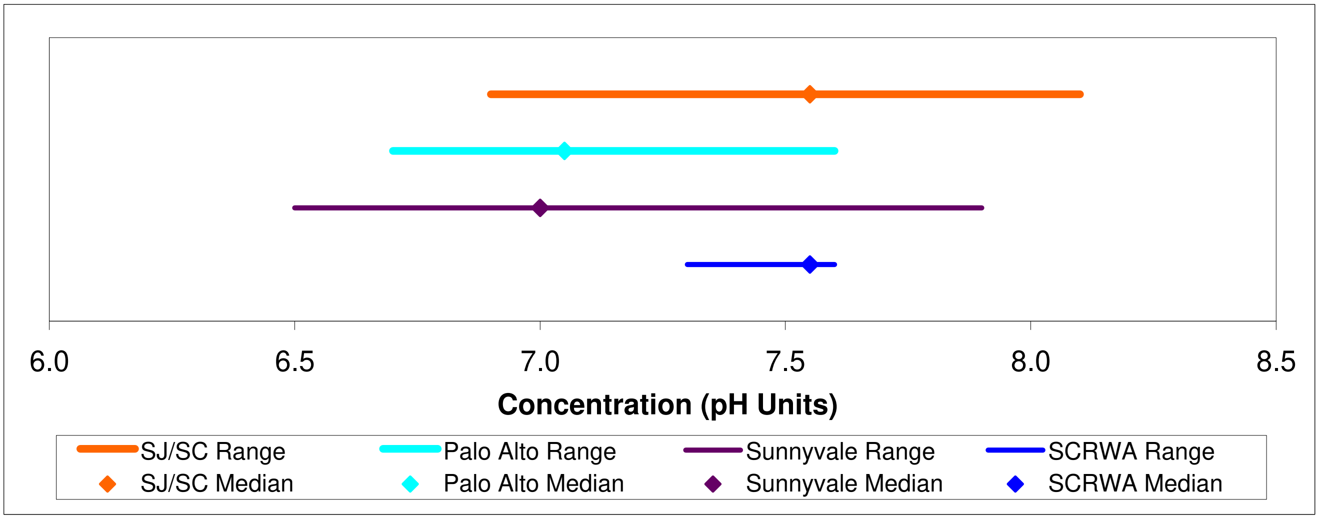
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

N-Nitroso Dimethylamine (NDMA)



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 26	Minimum: 63	Minimum: 4.4	Minimum: 0
Maximum: 287	Maximum: 490	Maximum: 110	Maximum: 5.5
Median: 31	Median: 230	Median: 43.3	Median: 3.65
Mean: 93.8	Mean: 261	Mean: 50.3	Mean: 3.2
Count: 4	Count: 3	Count: 4	Count: 4
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 75%

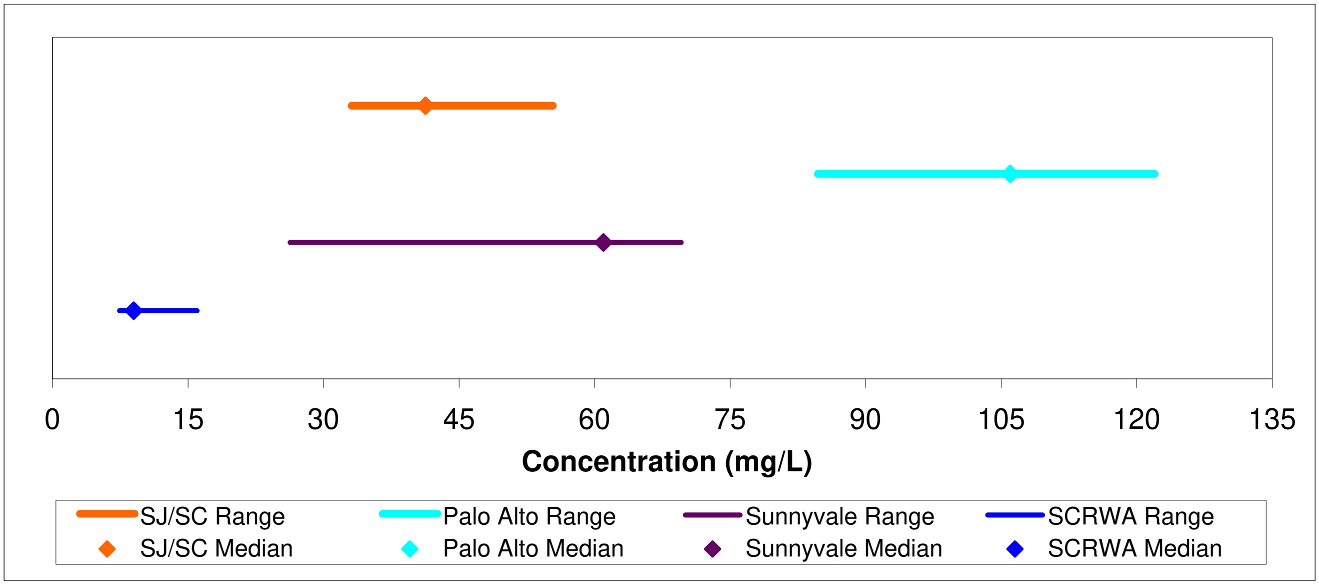
pH



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 6.9	Minimum: 6.7	Minimum: 6.5	Minimum: 7.3
Maximum: 8.1	Maximum: 7.6	Maximum: 7.9	Maximum: 7.6
Median: 7.55	Median: 7.05	Median: 7	Median: 7.55
Mean: 7.43	Mean: 7.1	Mean: 7.03	Mean: 7.52
Count: 8	Count: 4	Count: 6	Count: 6
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

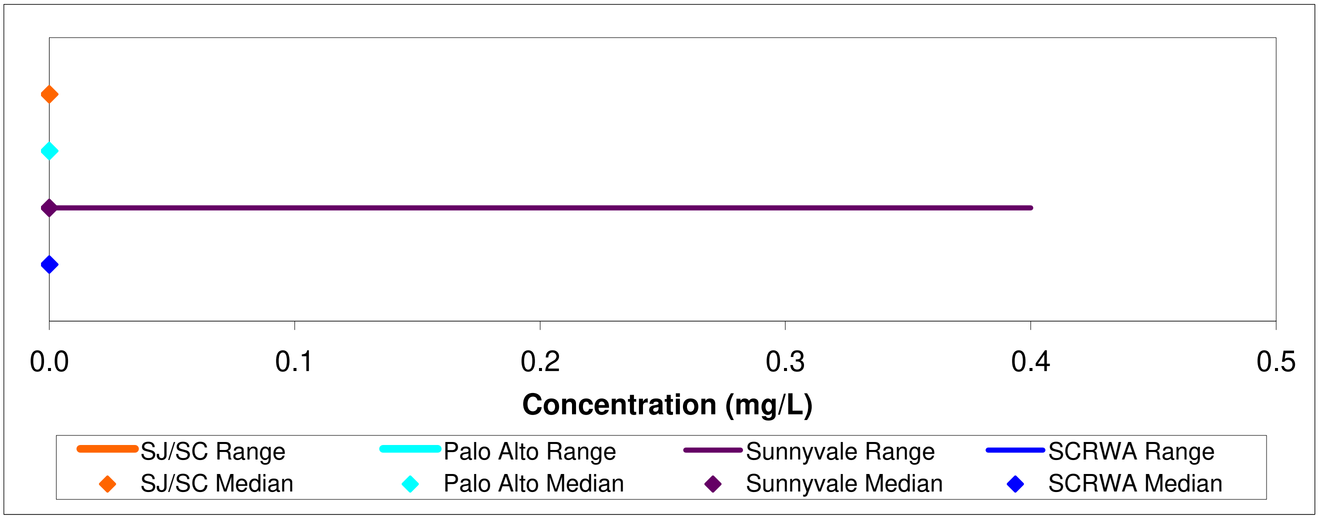
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Nitrate



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 33.1	Minimum: 84.7	Minimum: 26.3	Minimum: 7.45
Maximum: 55.4	Maximum: 122	Maximum: 69.6	Maximum: 16
Median: 41.3	Median: 106	Median: 61	Median: 9
Mean: 42.4	Mean: 104	Mean: 54.3	Mean: 10
Count: 6	Count: 3	Count: 5	Count: 5
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

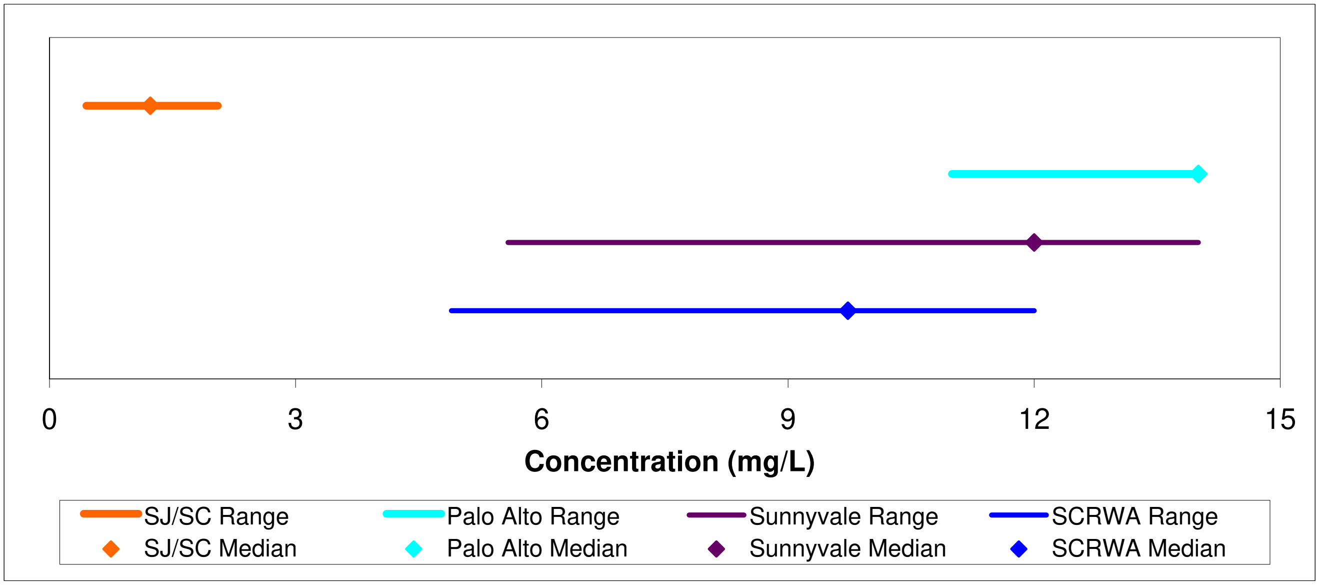
Nitrite



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 0	Minimum: 0	Minimum: 0
Maximum: 0	Maximum: 0	Maximum: 0.4	Maximum: 0
Median: 0	Median: 0	Median: 0	Median: 0
Mean: 0	Mean: 0	Mean: 0.08	Mean: 0
Count: 5	Count: 3	Count: 5	Count: 5
Detect Frequency: 0%	Detect Frequency: 0%	Detect Frequency: 20%	Detect Frequency: 0%

RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Phosphate



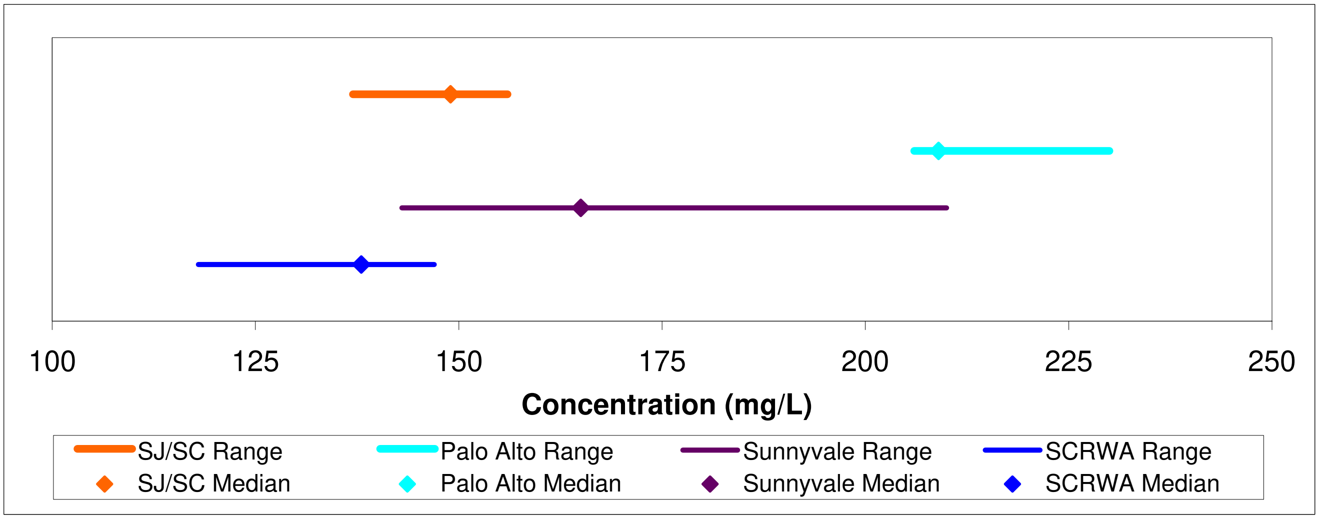
San Jose/Santa Clara
Minimum: 0.45
Maximum: 2.05
Median: 1.23
Mean: 1.29
Count: 5
Detect Frequency: 100%

Palo Alto
Minimum: 11
Maximum: 14
Median: 14
Mean: 13
Count: 3
Detect Frequency: 100%

Sunnyvale
Minimum: 5.59
Maximum: 14
Median: 12
Mean: 10.2
Count: 5
Detect Frequency: 100%

SCRWA
Minimum: 4.9
Maximum: 12
Median: 9.73
Mean: 9.26
Count: 5
Detect Frequency: 100%

Sodium



San Jose/Santa Clara
Minimum: 137
Maximum: 156
Median: 149
Mean: 148
Count: 6
Detect Frequency: 100%

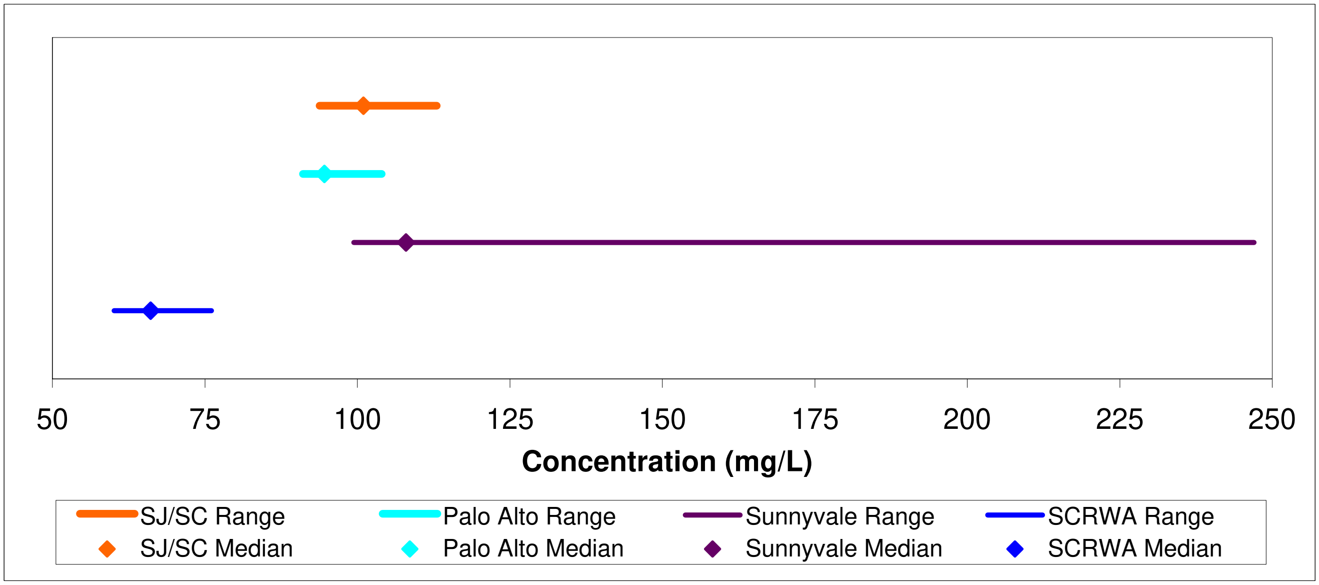
Palo Alto
Minimum: 206
Maximum: 230
Median: 209
Mean: 215
Count: 3
Detect Frequency: 100%

Sunnyvale
Minimum: 143
Maximum: 210
Median: 165
Mean: 177
Count: 5
Detect Frequency: 100%

SCRWA
Minimum: 118
Maximum: 147
Median: 138
Mean: 134
Count: 5
Detect Frequency: 100%

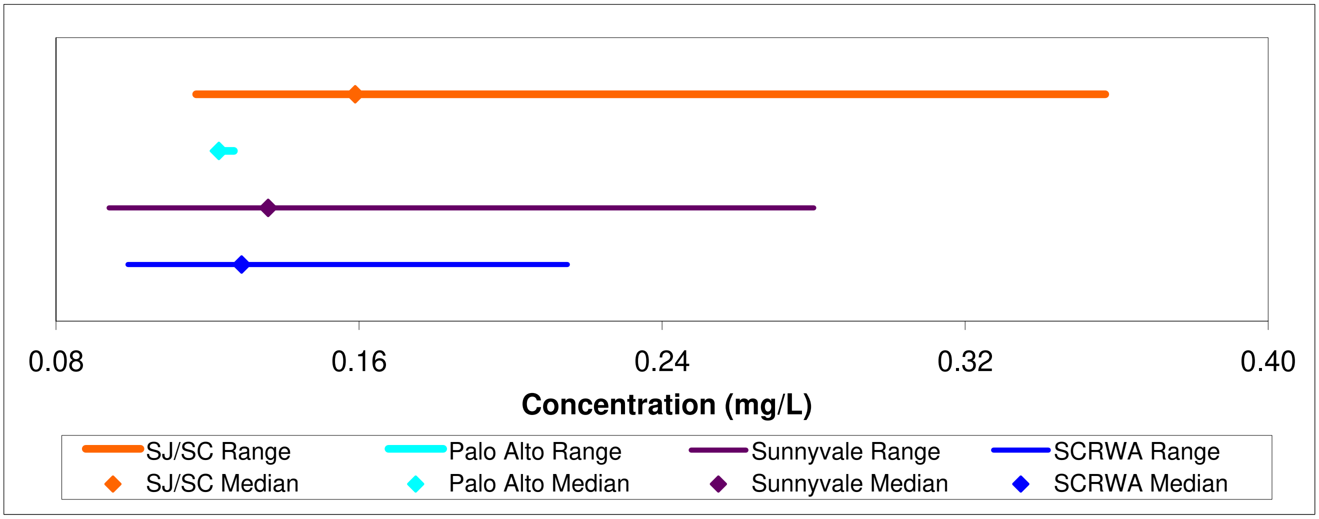
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Sulfate



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 93.8	Minimum: 91.1	Minimum: 99.4	Minimum: 60.1
Maximum: 113	Maximum: 104	Maximum: 247	Maximum: 76.1
Median: 101	Median: 94.6	Median: 108	Median: 66.1
Mean: 102	Mean: 96.6	Mean: 137	Mean: 67.7
Count: 5	Count: 3	Count: 5	Count: 5
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

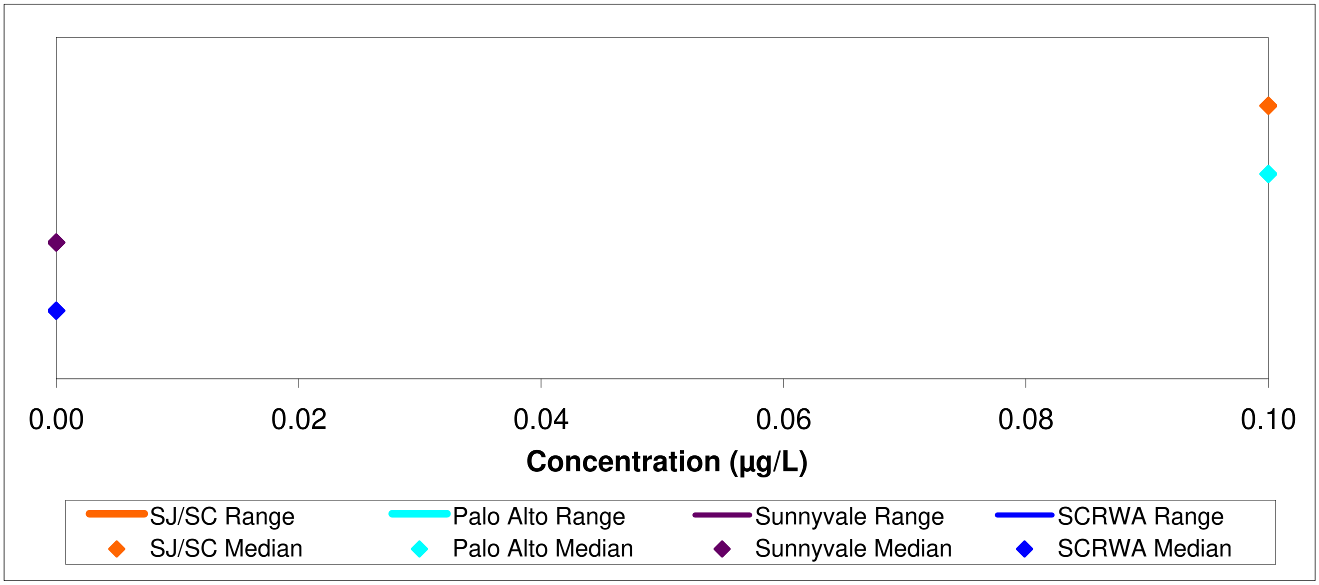
Surfactants (MBAS)



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0.117	Minimum: 0.124	Minimum: 0.094	Minimum: 0.099
Maximum: 0.357	Maximum: 0.127	Maximum: 0.28	Maximum: 0.215
Median: 0.159	Median: 0.123	Median: 0.136	Median: 0.129
Mean: 0.198	Mean: 0.126	Mean: 0.162	Mean: 0.143
Count: 4	Count: 2	Count: 4	Count: 4
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

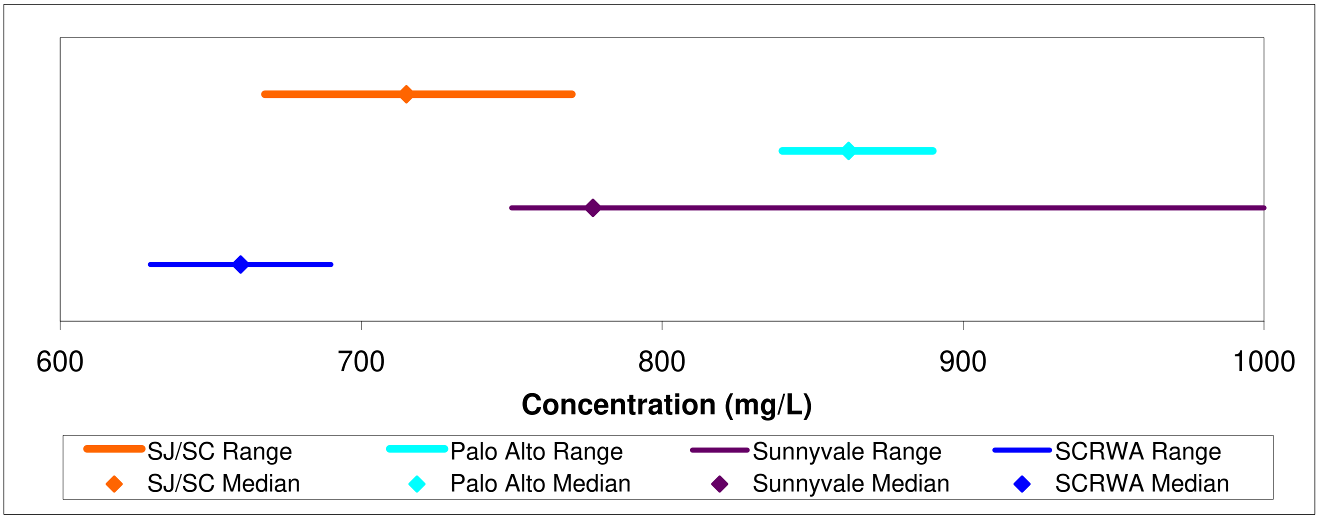
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Terbuthylazine



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0.1	Minimum: 0.1	Minimum: 0	Minimum: 0
Maximum: 0.1	Maximum: 0.1	Maximum: 0	Maximum: 0
Median: 0.1	Median: 0.1	Median: 0	Median: 0
Mean: 0.1	Mean: 0.1	Mean: 0	Mean: 0
Count: 1	Count: 1	Count: 1	Count: 1
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 0%	Detect Frequency: 0%

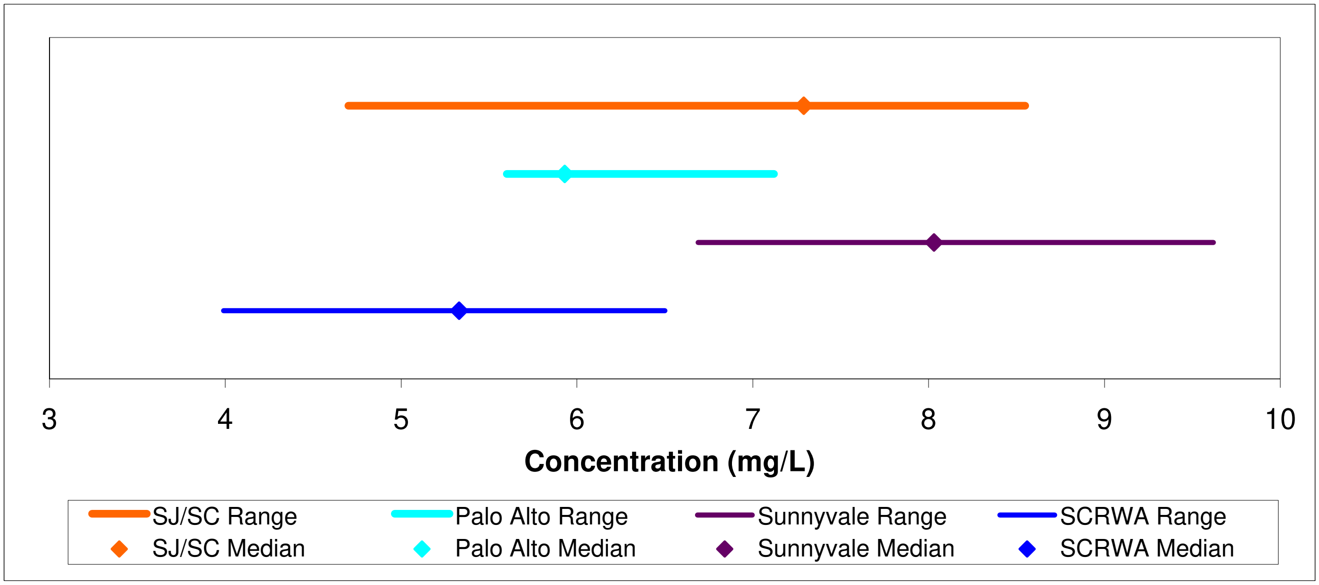
Total Filterable Residue at 180C (TDS)



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 668	Minimum: 840	Minimum: 750	Minimum: 630
Maximum: 770	Maximum: 890	Maximum: 1000	Maximum: 690
Median: 715	Median: 862	Median: 777	Median: 660
Mean: 716	Mean: 864	Mean: 841	Mean: 658
Count: 6	Count: 3	Count: 5	Count: 5
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

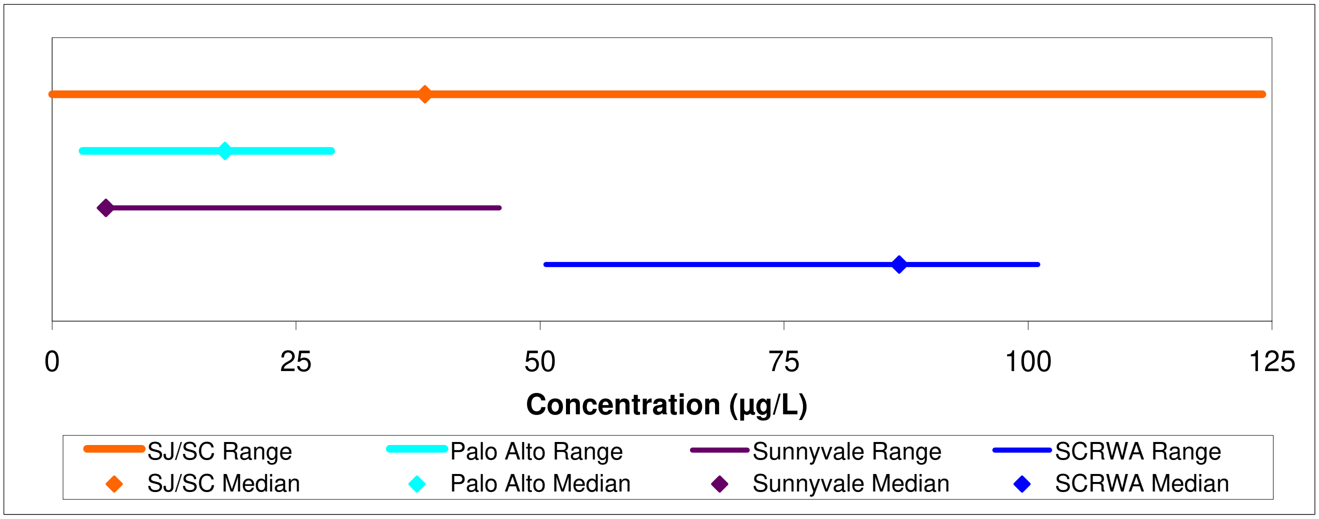
RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

Total Organic Carbon (TOC)



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 4.7	Minimum: 5.6	Minimum: 6.69	Minimum: 3.99
Maximum: 8.55	Maximum: 7.12	Maximum: 9.62	Maximum: 6.5
Median: 7.29	Median: 5.93	Median: 8.03	Median: 5.33
Mean: 6.62	Mean: 6.22	Mean: 8.25	Mean: 5.27
Count: 5	Count: 3	Count: 5	Count: 5
Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

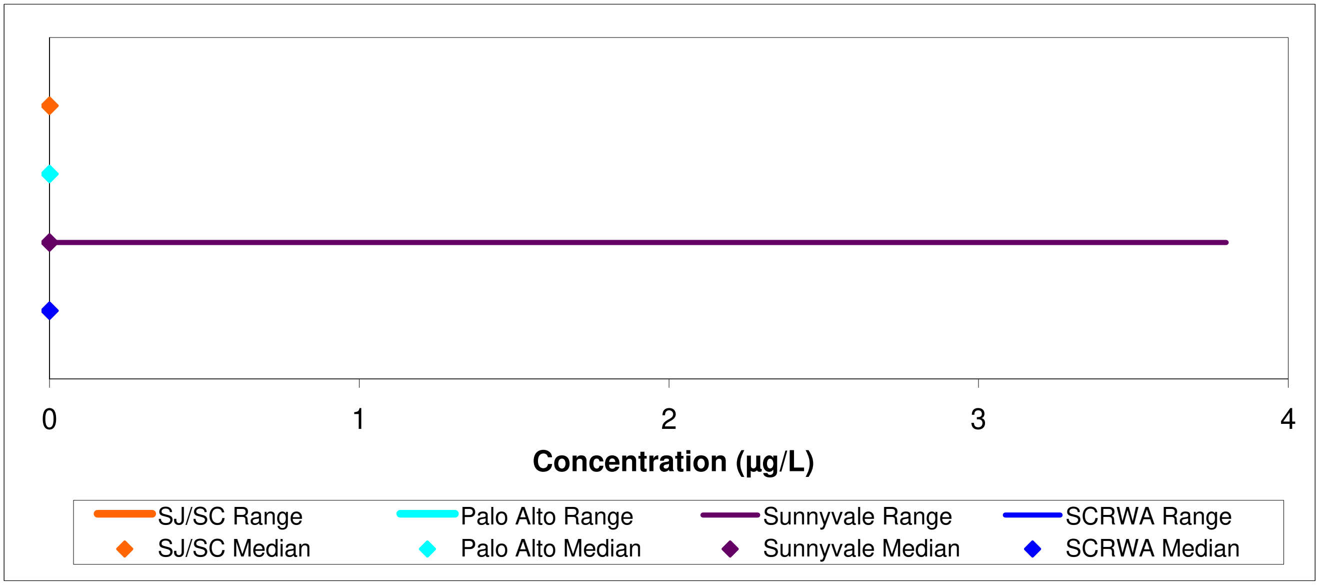
Trichloroacetic Acid



San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 3.1	Minimum: 5.2	Minimum: 50.6
Maximum: 124	Maximum: 28.6	Maximum: 45.8	Maximum: 101
Median: 38.2	Median: 17.7	Median: 5.5	Median: 86.8
Mean: 45.6	Mean: 16.5	Mean: 16.8	Mean: 79.5
Count: 6	Count: 3	Count: 5	Count: 3
Detect Frequency: 67%	Detect Frequency: 100%	Detect Frequency: 100%	Detect Frequency: 100%

RECLAIMED WATER CHEMISTRY
SUMMARY STATISTICS

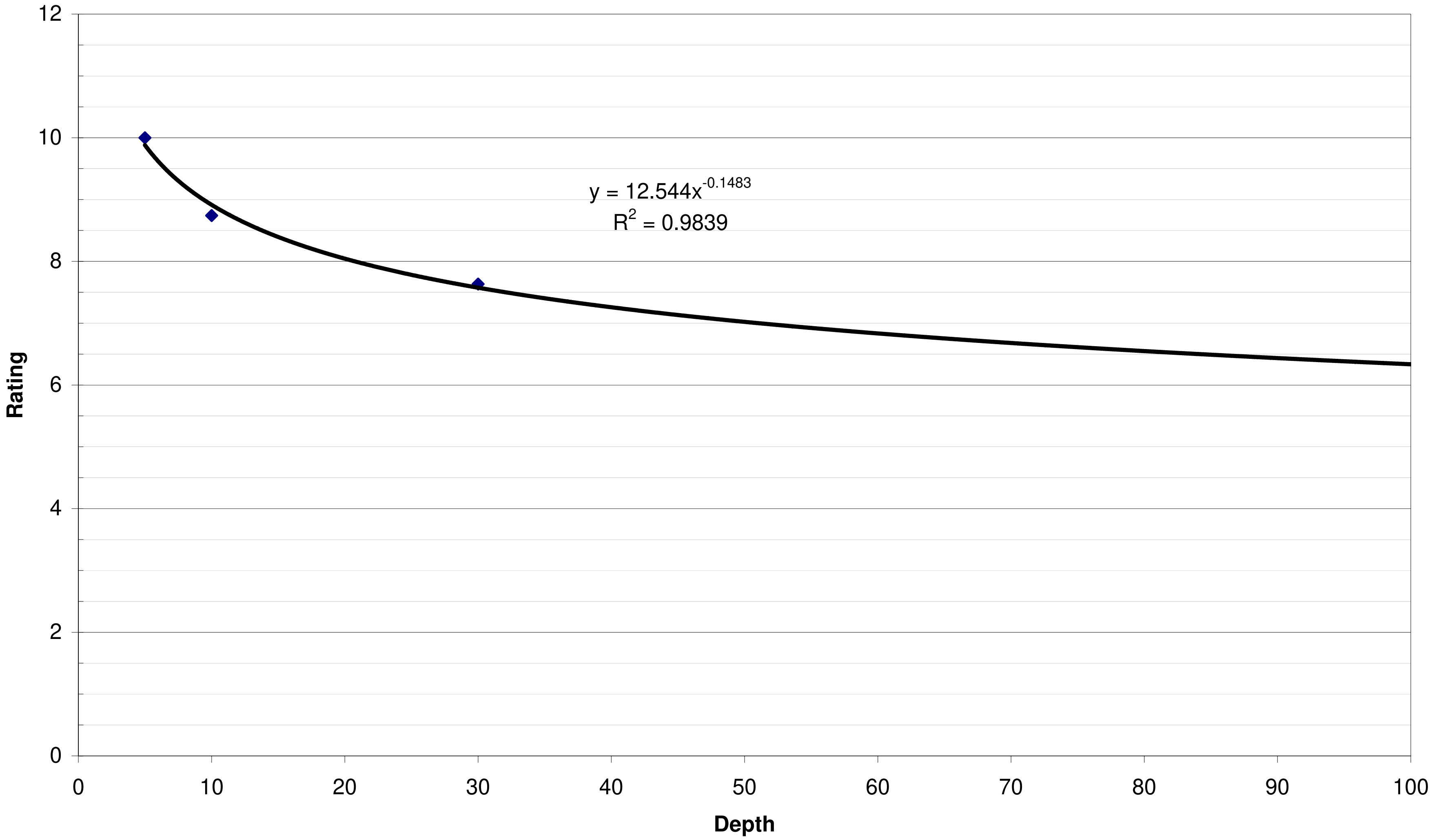
Xylenes, Total

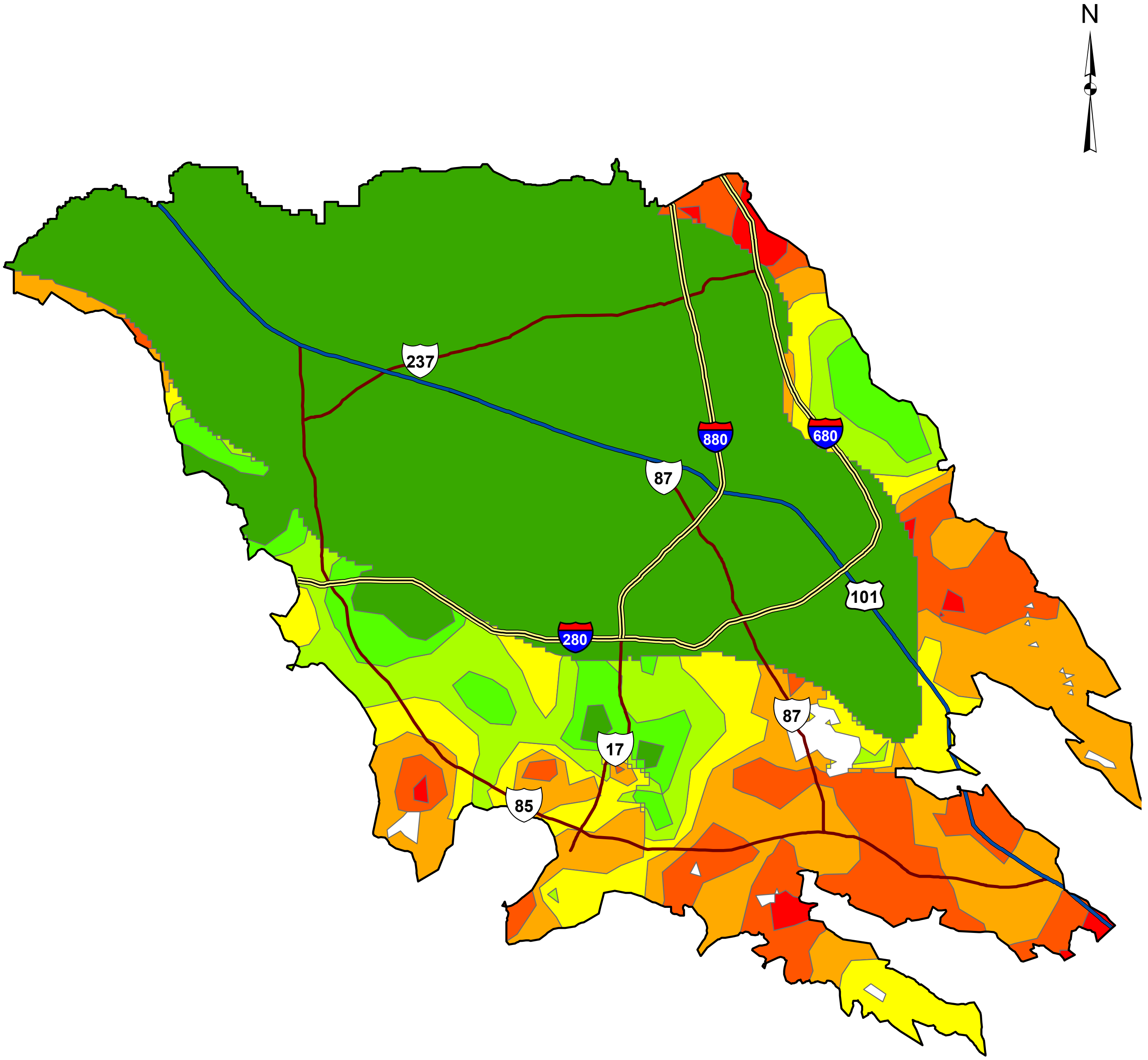


San Jose/Santa Clara	Palo Alto	Sunnyvale	SCRWA
Minimum: 0	Minimum: 0	Minimum: 0	Minimum: 0
Maximum: 0	Maximum: 0	Maximum: 3.8	Maximum: 0
Median: 0	Median: 0	Median: 0	Median: 0
Mean: 0	Mean: 0	Mean: 0.76	Mean: 0
Count: 4	Count: 4	Count: 5	Count: 4
Detect Frequency: 0%	Detect Frequency: 0%	Detect Frequency: 20%	Detect Frequency: 0%

FIGURES

FIGURE IV-2-1
DERIVATION OFDEPTH TO WATER RATINGS





DEPTH TO WATER RATINGS

RATING. RANGE

- 🟩 **6, 100+ FEET**
- 🟩 **6.3, 75-100 FEET**
- 🟩 **6.6, 50-75 FEET**
- 🟨 **7, 30-50 FEET**
- 🟧 **7.6, 15-30 FEET**
- 🟧 **8.4, 5-15 FEET**
- 🟥 **10, 0-5 FEET**

ROADS

HWY_TYPE

- INTERSTATE
- US
- STATE
- ARTERIAL

DEPTH TO WATER RATINGS
SANTA CLARA GROUNDWATER SUBBASIN

PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

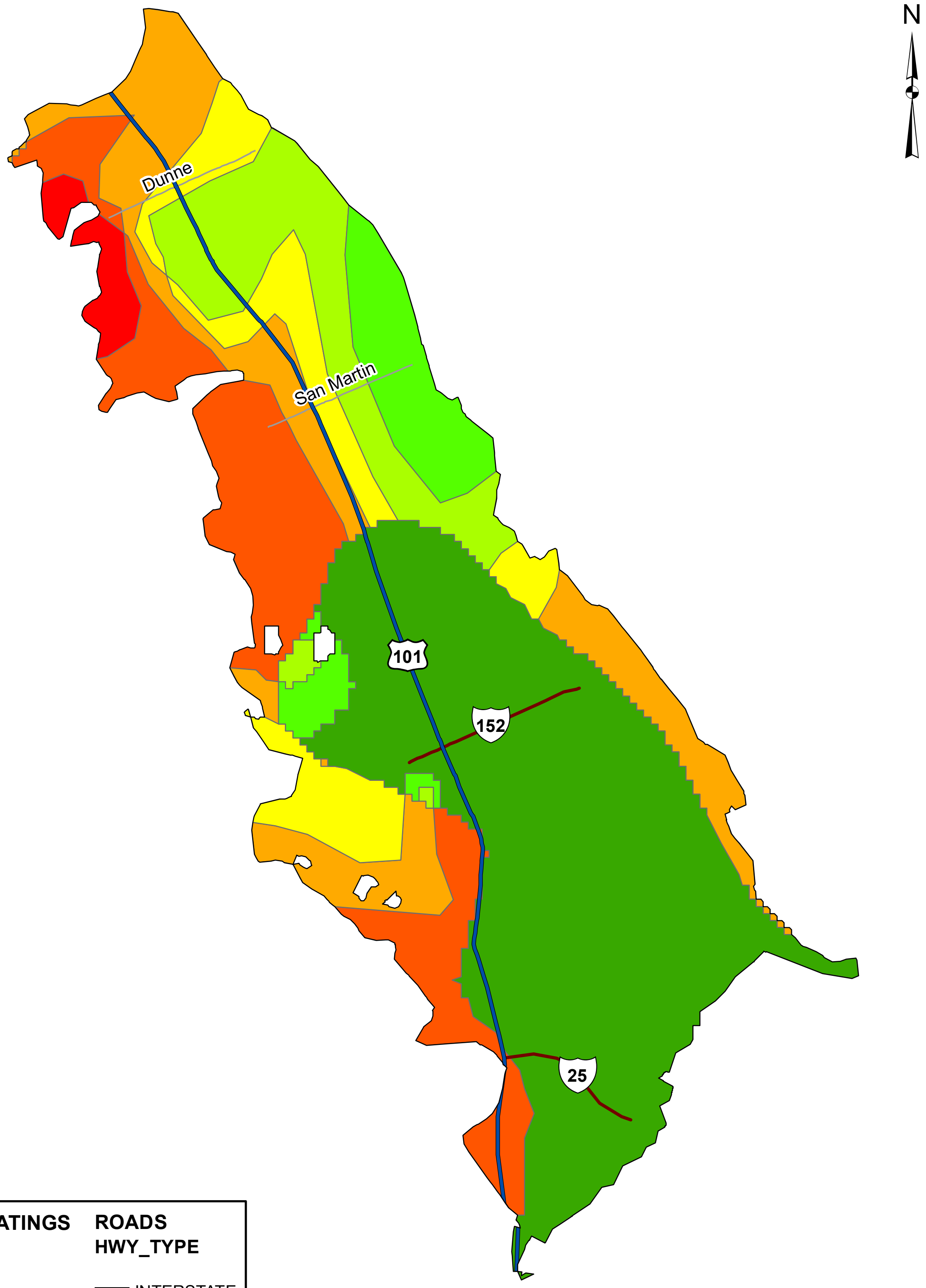
△	08-19-11	ISSUED FOR REPORT	MS	NDW	NDW
NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

Locus
TECHNOLOGIES

0 0.5 1 2 3 4 Miles

Drawing Number

Figure IV 2-2



DEPTH TO WATER RATINGS
RATING. RANGE
🟩 **6, 100+ FEET**
🟩 **6.3, 75-100 FEET**
🟩 **6.6, 50-75 FEET**
🟨 **7, 30-50 FEET**
🟧 **7.6, 15-30 FEET**
🟧 **8.4, 5-15 FEET**
🟥 **10, 0-5 FEET**

ROADS
HWY_TYPE
═ INTERSTATE
━ US
━ STATE
─ ARTERIAL

REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

DEPTH TO WATER RATINGS
LLAGAS GROUNDWATER SUBBASIN

PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

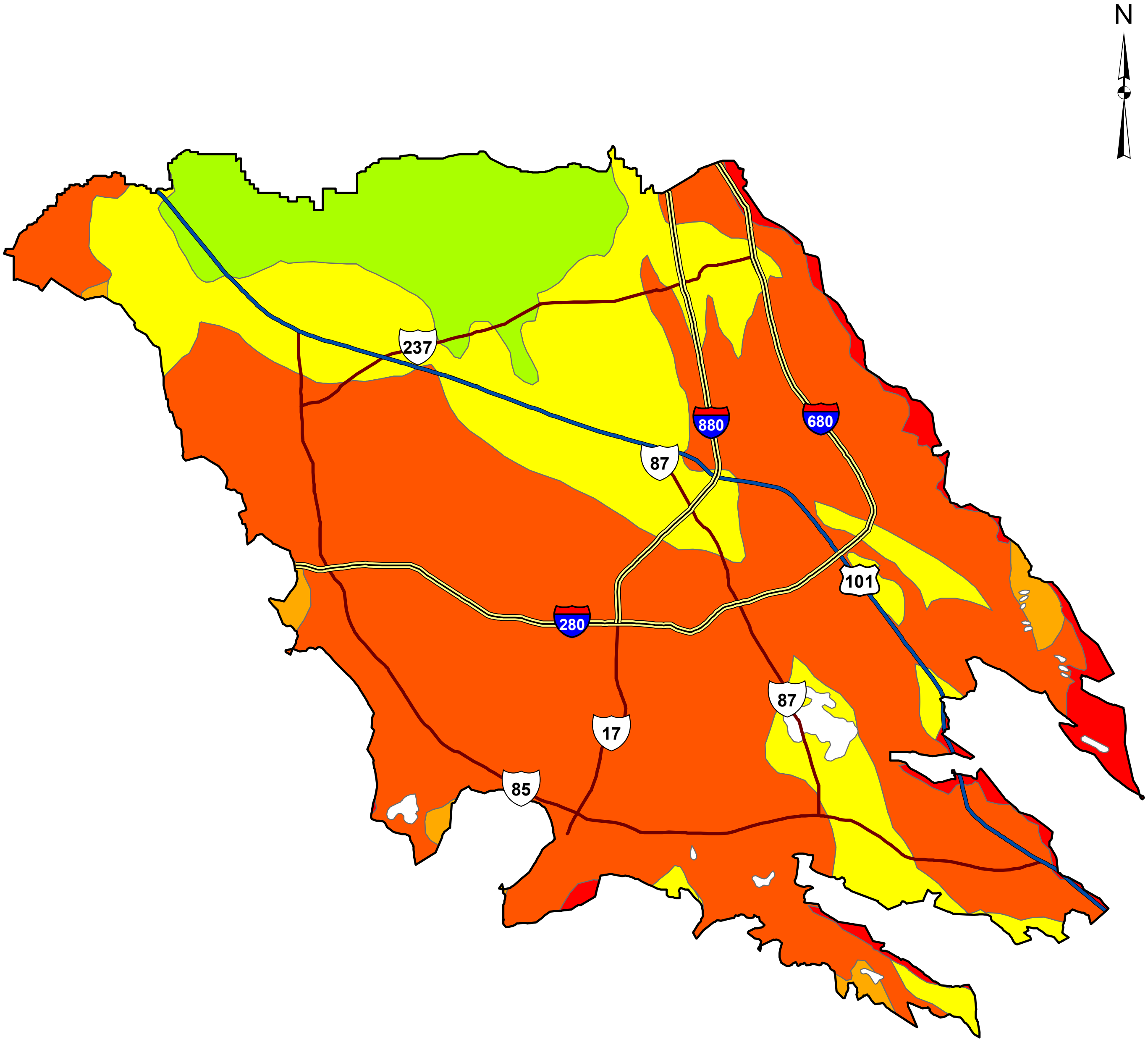
△	08-19-11	ISSUED FOR REPORT	MS	NDW	NDW
NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

Locus
TECHNOLOGIES

0 0.25 0.5 1 1.5 2
Miles

Drawing Number

Figure IV 2-3



Soil Media Ratings

Ratings, Range

🟩	**2, MASSIVE CLAY**
🟨	**3, CLAY LOAM**
🟧	**4, SILTY LOAM**
🟧	**6, SANDY LOAM**
🟥	**7, SAND LOAM TO SAND**

ROADS

HWY_TYPE

═	INTERSTATE
━	US
━	STATE
─	ARTERIAL

REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

SOIL MEDIA RATINGS
SANTA CLARA GROUNDWATER SUBBASIN

PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

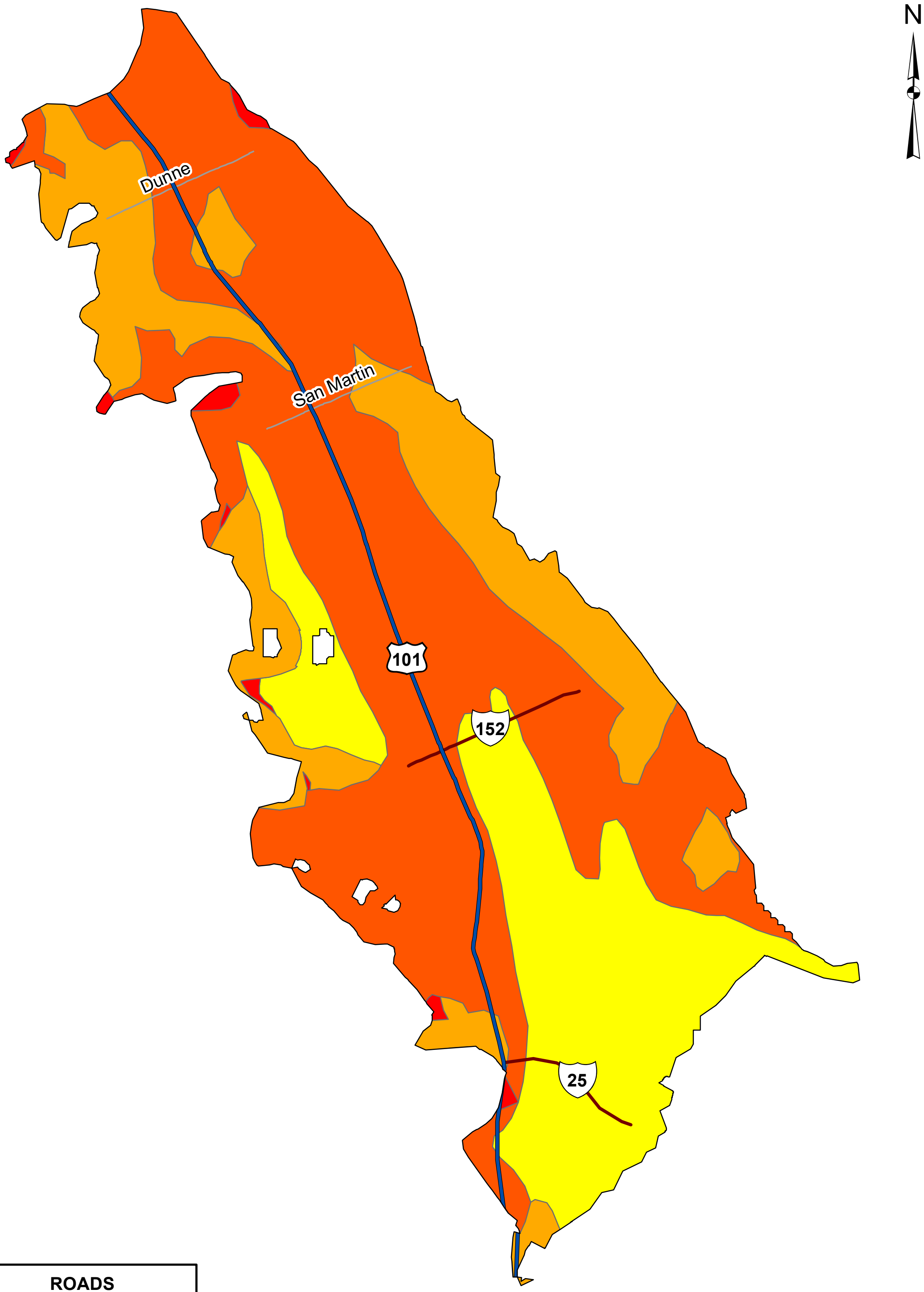
△	08-19-11	ISSUED FOR REPORT	MS	NDW	NDW
NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

Locus
TECHNOLOGIES

0 0.5 1 2 3 4 Miles

Drawing Number

Figure IV 2-4



Soil Media Ratings
Ratings, Range
- 🟩 **2, MASSIVE CLAY**
- 🟨 **3, CLAY LOAM**
- 🟧 **4, SILTY LOAM**
- 🟧 **6, SANDY LOAM**
- 🟥 **7, SAND LOAM TO SAND**

ROADS
HWY_TYPE
- INTERSTATE
- US
- STATE
- ARTERIAL

REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

SOIL MEDIA RATINGS
LLAGAS GROUNDWATER SUBBASIN

PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

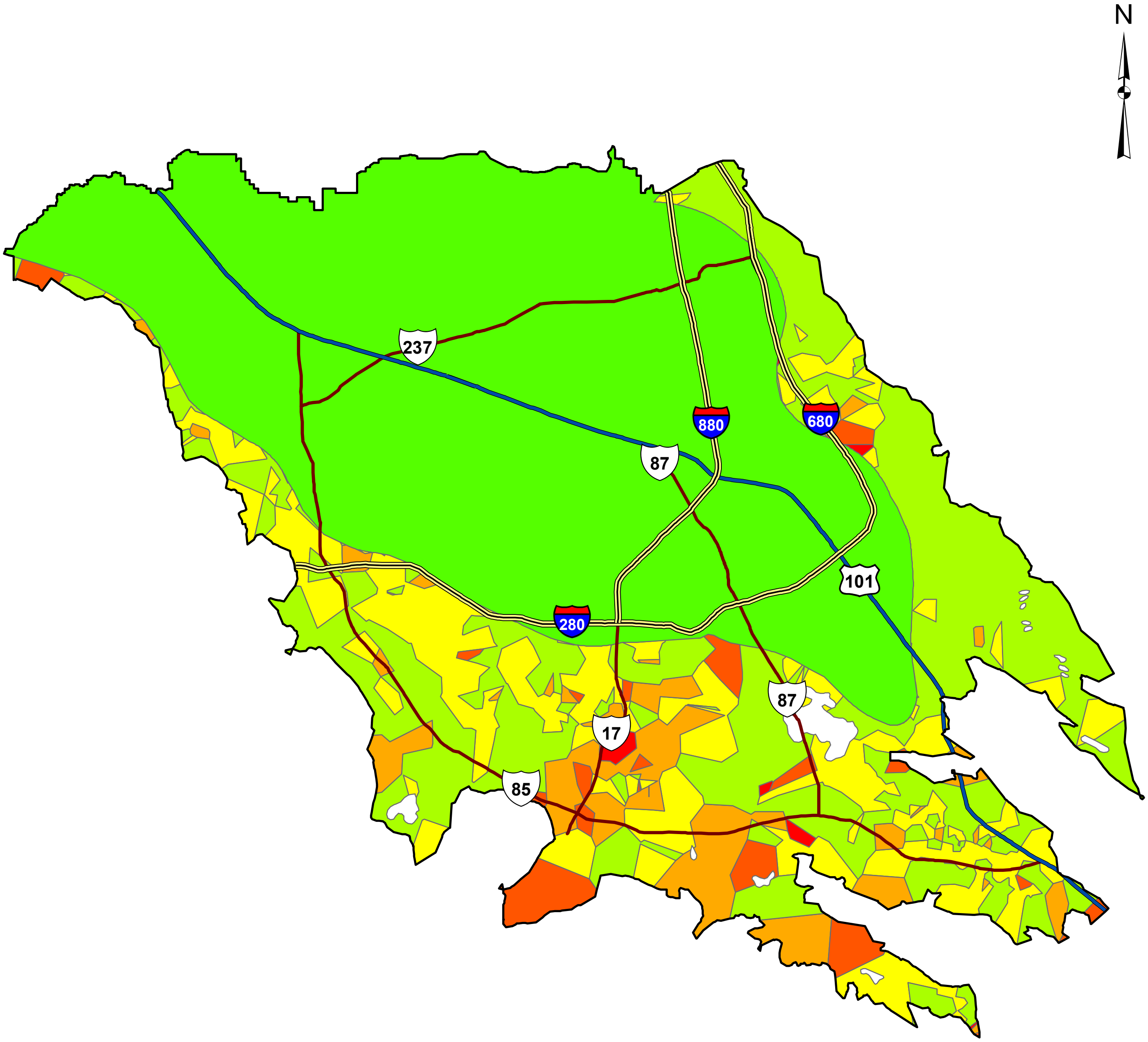
△	08-19-11	ISSUED FOR REPORT	MS	NDW	NDW
NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

Locus
TECHNOLOGIES

0 0.25 0.5 1 1.5 2 Miles

Drawing Number	

Figure IV 2-5



IMPACT OF THE VADOZE ZONE MEDIA RATINGS

RATING, VALUE

- 🟩 **1, CONFINING LAYER**
- 🟩 **2, CLAY**
- 🟨 **3, SILT**
- 🟧 **4, LOAM**
- 🟧 **6, SAND**
- 🟥 **9, GRAVEL**

ROADS

HWY_TYPE

- ═ **INTERSTATE**
- — **US**
- — **STATE**
- — **ARTERIAL**

IMPACT OF THE VADOSE MEDIA RATINGS
SANTA CLARA GROUNDWATER SUBBASIN

PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

REFERENCE:

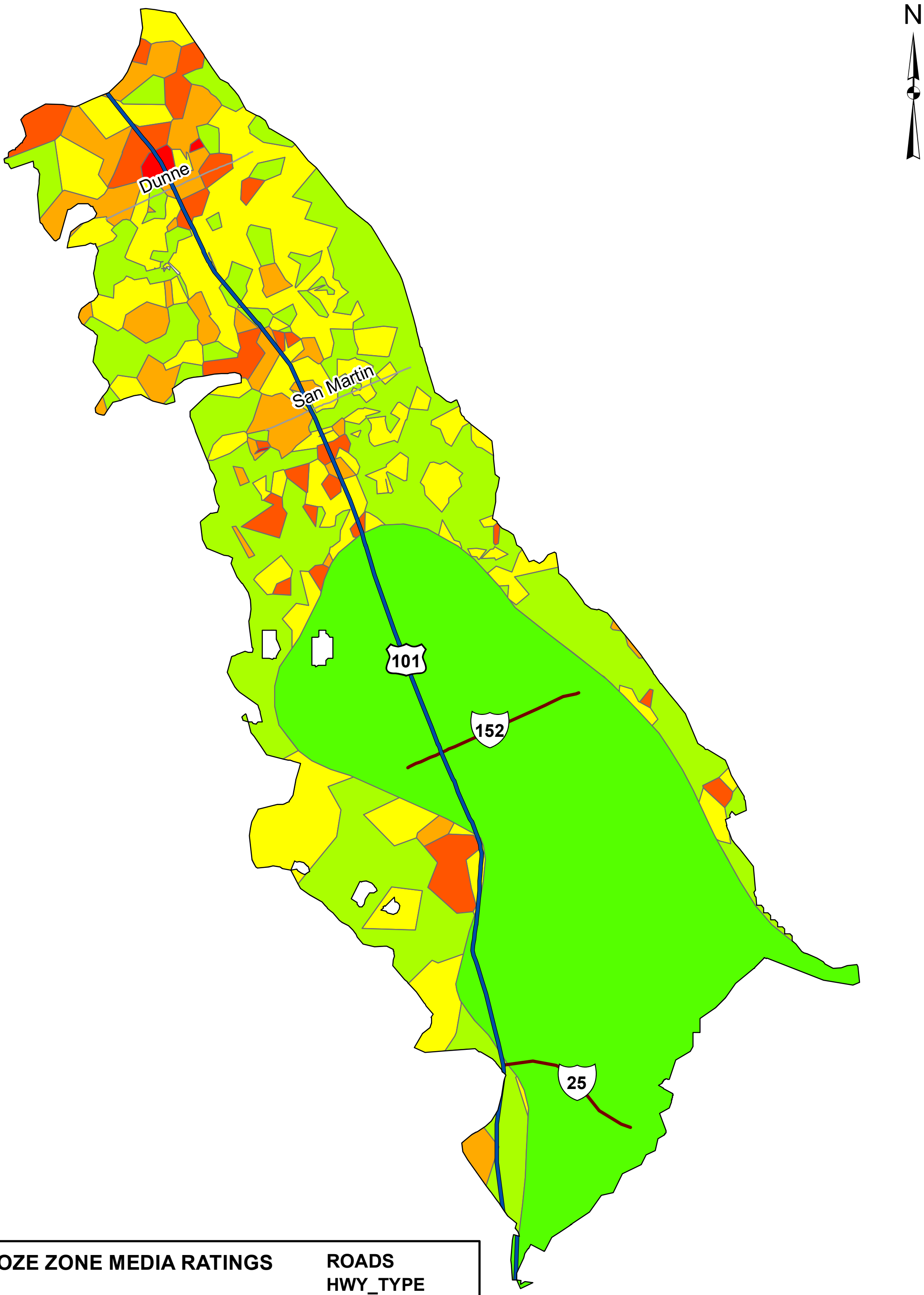
1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

△	08-19-11	ISSUED FOR REPORT	MS	NDW	NDW
NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

Locus
TECHNOLOGIES

0 0.5 1 2 3 4 Miles

Drawing Number	
Figure IV 2-6	



IMPACT OF THE VADOZE ZONE MEDIA RATINGS

RATING, VALUE

- 🟩 **1, CONFINING LAYER**
- 🟩 **2, CLAY**
- 🟨 **3, SILT**
- 🟧 **4, LOAM**
- 🟧 **6, SAND**
- 🟥 **9, GRAVEL**

ROADS

HWY_TYPE

- ═ **INTERSTATE**
- ━ **US**
- ━ **STATE**
- ─ **ARTERIAL**

IMPACT OF THE VADOSE MEDIA RATINGS
LLGAS GROUNDWATER SUBBASIN

PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

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NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

Locus TECHNOLOGIES

0 0.25 0.5 1 1.5 2 Miles

Drawing Number

Figure IV 2-7

FIGURE IV-2-8: BASELINE GRAPH
SOIL MEDIA: SILT, VADOSE ZONE MEDIA: SILT
TIME: 50 YEARS, CONSTITUENT: CHLOROFORM
EVALUATION OF POTENTIAL IMPACTS
RECYCLED WATER STUDY

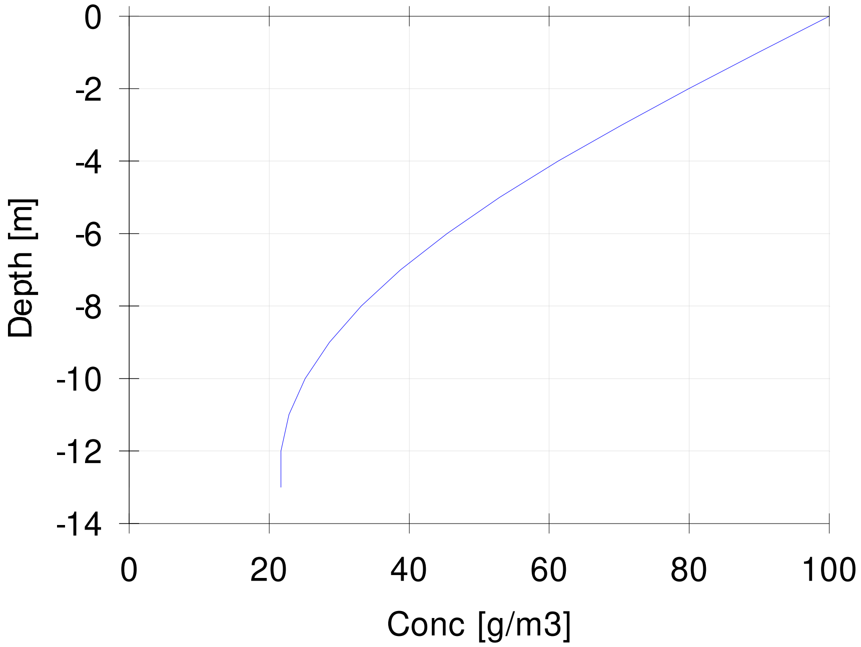


FIGURE IV-2-9: CALIBRATION GRAPH 1
SOIL MEDIA: CLAY, VADOSE ZONE MEDIA: SILT
TIME: 50 YEARS, CONSTITUENT: CHLOROFORM
EVALUATION OF POTENTIAL IMPACTS
RECYCLED WATER STUDY

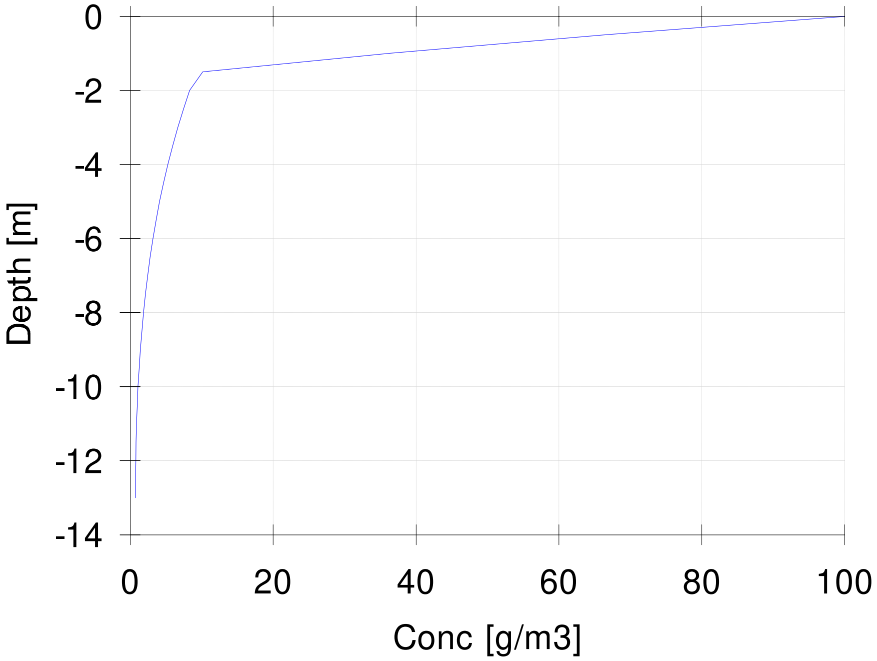
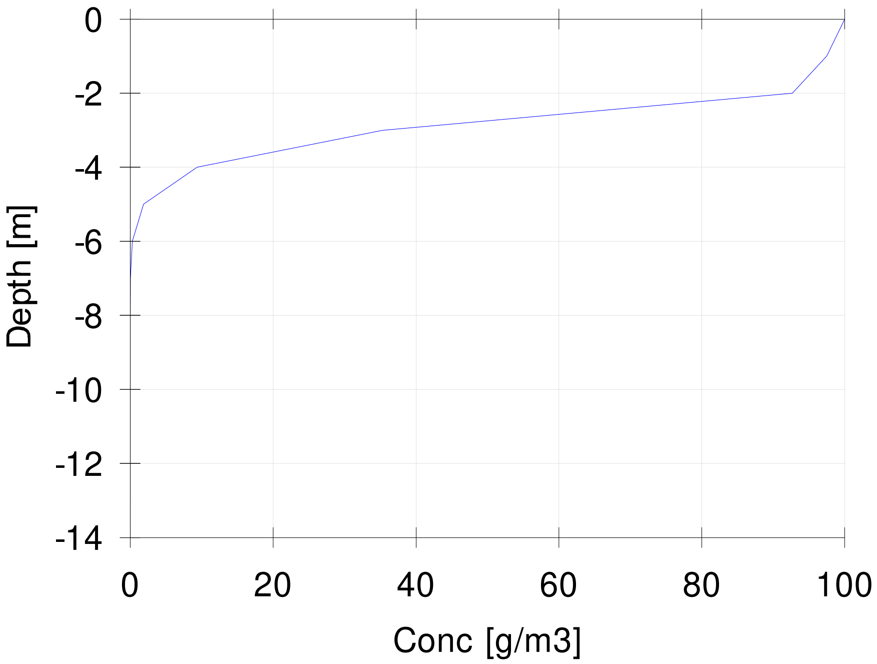
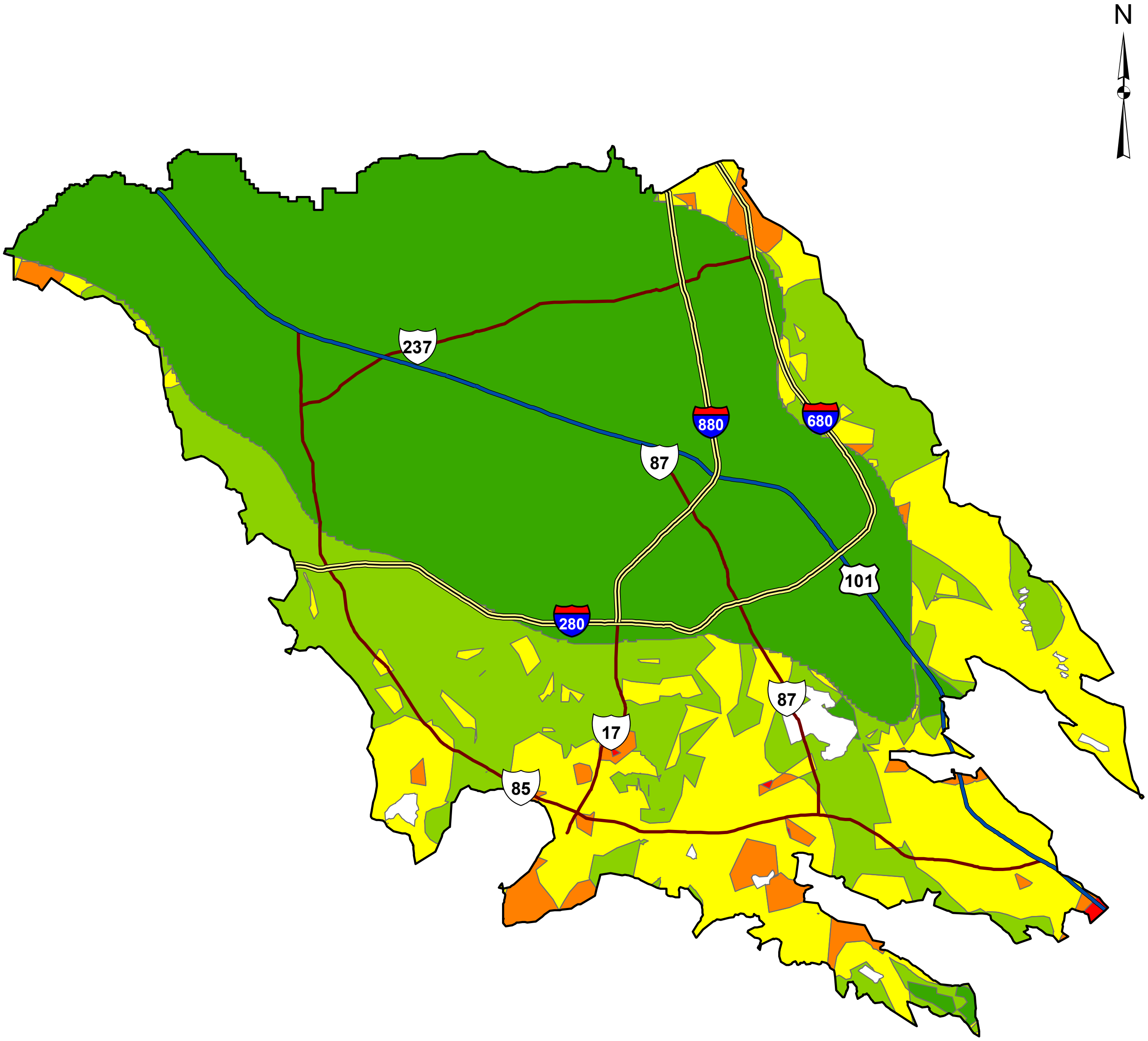


FIGURE IV-2-10: CALIBRATION GRAPH 2
SOIL MEDIA: SILT, VADOSE ZONE MEDIA: CLAY
TIME: 50 YEARS, CONSTITUENT: CHLOROFORM
EVALUATION OF POTENTIAL IMPACTS
RECYCLED WATER STUDY





SOIL AQUIFER TREATMENT CAPACITY RATINGS, RANGE

- 🟩 **1 To 2, HIGH CAPACITY**
- 🟩 **3 To 4, GOOD CAPACITY**
- 🟨 **5 To 6, AVERAGE CAPACITY**
- 🟧 **7 To 8, MARGINAL CAPACITY**
- 🟥 **9 To10, LEAST CAPACITY**

ROADS
HWY_TYPE

- **INTERSTATE**
- **US**
- **STATE**
- **ARTERIAL**

REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

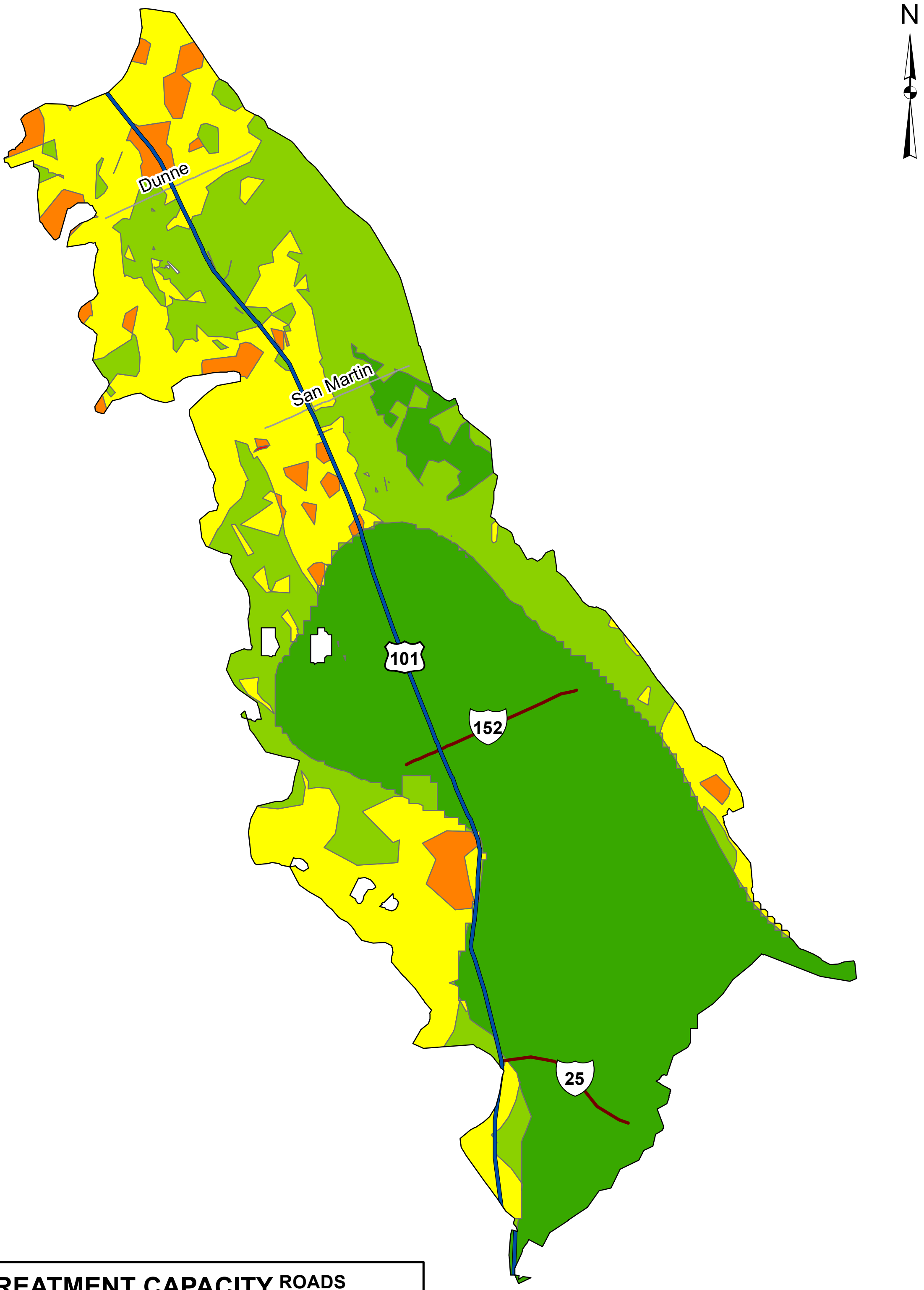
NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
△	08-19-11	ISSUED FOR REPORT	MS	NDW	NDW

SOIL AQUIFER TREATMENT CAPACITY
SANTA CLARA GROUNDWATER SUBBASIN

PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

Drawing Number

Figure IV 2-11



SOIL AQUIFER TREATMENT CAPACITY

RATINGS, RANGE

- 🟩 1 To 2, HIGH CAPACITY
- 🟩 3 To 4, GOOD CAPACITY
- 🟨 5 To 6, AVERAGE CAPACITY
- 🟧 7 To 8, MARGINAL CAPACITY
- 🟥 9 To10, LEAST CAPACITY

ROADS
HWY_TYPE

- **INTERSTATE**
- **US**
- **STATE**
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REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

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NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

SOIL AQUIFER TREATMENT CAPACITY
LLAGAS GROUNDWATER SUBBASIN

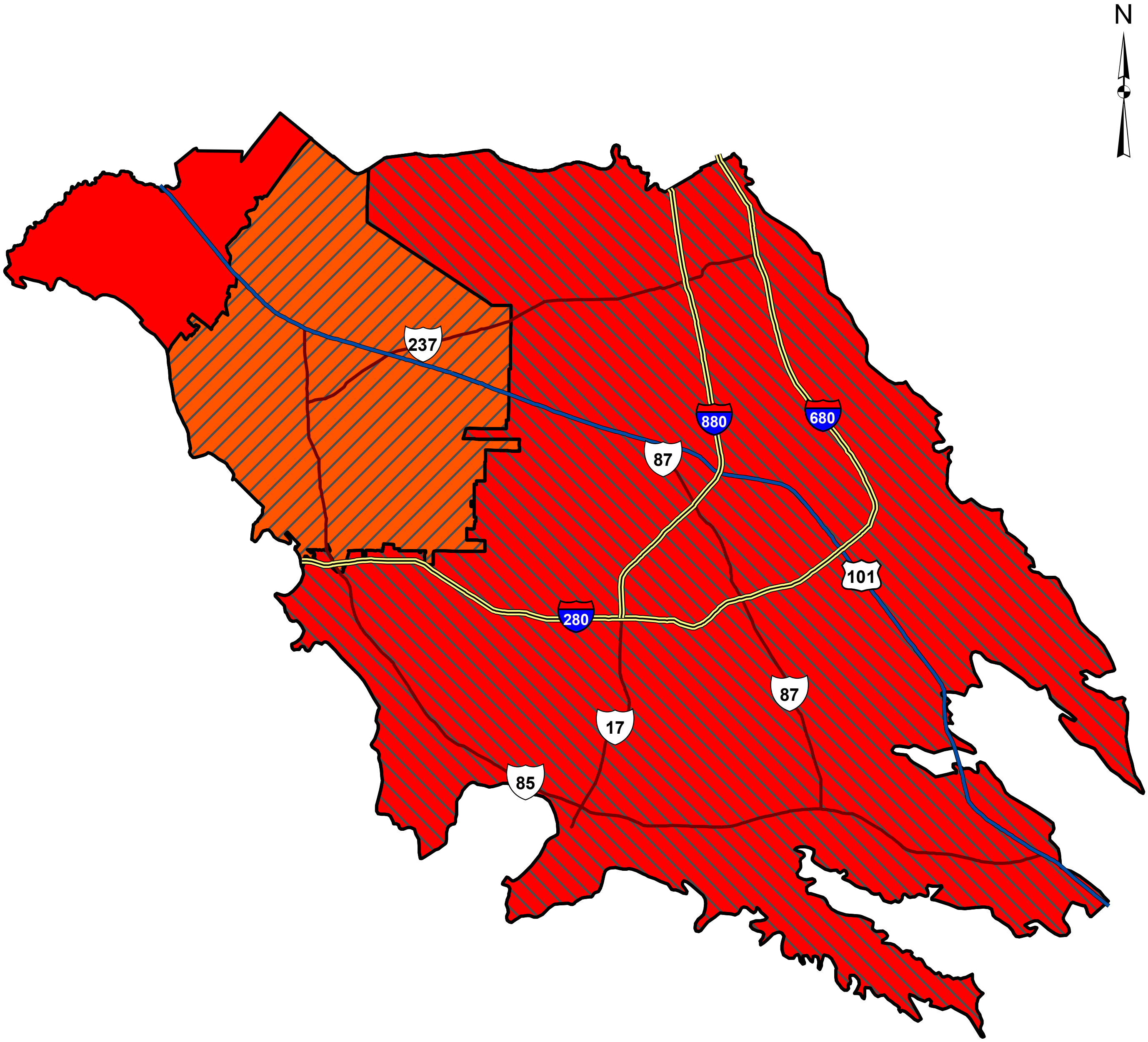
PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

Locus
TECHNOLOGIES

0 0.25 0.5 1 1.5 2 Miles

Drawing Number

Figure IV 2-12



RECYCLED WATER QUALITY RATING

Rating, LOCUS_RWQ

- 🟧 **7.45, SCRWA**
- ▨ **8.08, SWPCP**
- 🟥 **9.61, PARQWCP**
- ▨ **9.63, SJ/SC WPCP**

ROADS

HWY_TYPE

- **INTERSTATE**
- **US**
- **STATE**
- **ARTERIAL**

REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

RECYCLED WATER QUALITY RATING
20% OF ASSIMILATIVE CAPACITY CONSIDERED
SANTA CLARA GROUNDWATER SUBBASIN
PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

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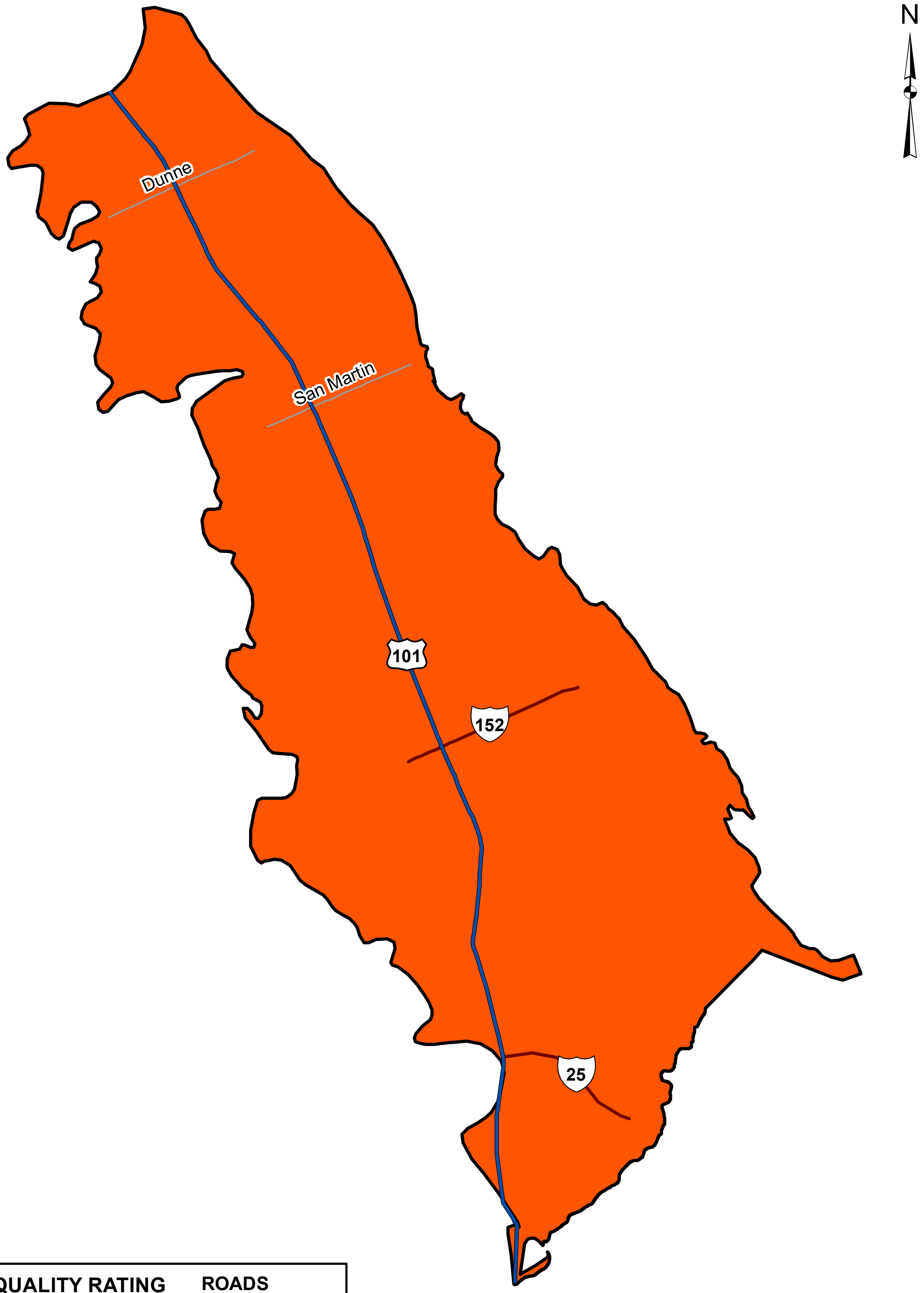
NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

Locus
TECHNOLOGIES

0 0.5 1 2 3 4 Miles

Drawing Number

Figure IV 3-1



RECYCLED WATER QUALITY RATING

Rating, LOCUS_RWQ

- 🟧 **7.45, SCRWA**
- ▨ **8.08, SWPCP**
- 🟥 **9.61, PARQWCP**
- ▨ **9.63, SJ/SC WPCP**

ROADS

HWY_TYPE

- **INTERSTATE**
- **US**
- **STATE**
- **ARTERIAL**

REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

RECYCLED WATER QUALITY RATING
20% OF ASSIMILATIVE CAPACITY CONSIDERED
LLAGAS GROUNDWATER SUBBASIN
PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

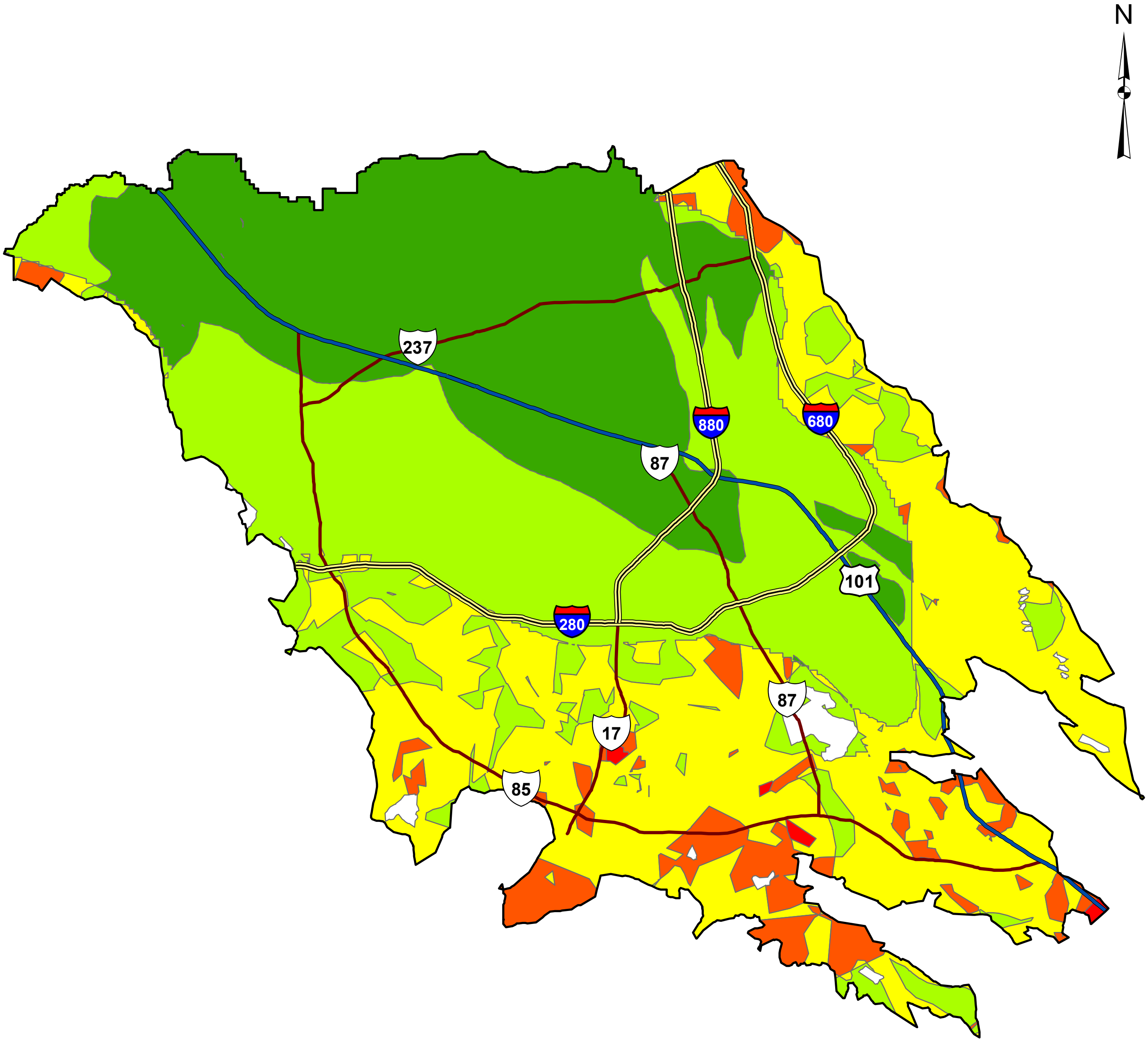
△	08-19-11	ISSUED FOR REPORT	MS	NDW	NDW
NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

Locus
TECHNOLOGIES

0 0.25 0.5 1 1.5 2
Miles

Drawing Number

Figure IV 3-2



GW DEGRADATION POTENTIAL

Range

🟩 **1 To 20 Lowest Potential**

🟩 **21 To 40 Low Potential**

🟨 **41 To 60 Average Potential**

🟧 **61 To 80 High Potential**

🟥 **81 To 100 Highest Potential**

ROADS

HWY_TYPE

INTERSTATE

US

STATE

ARTERIAL

GROUNDWATER DEGRADATION POTENTIAL
SANTA CLARA GROUNDWATER SUBBASIN

PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

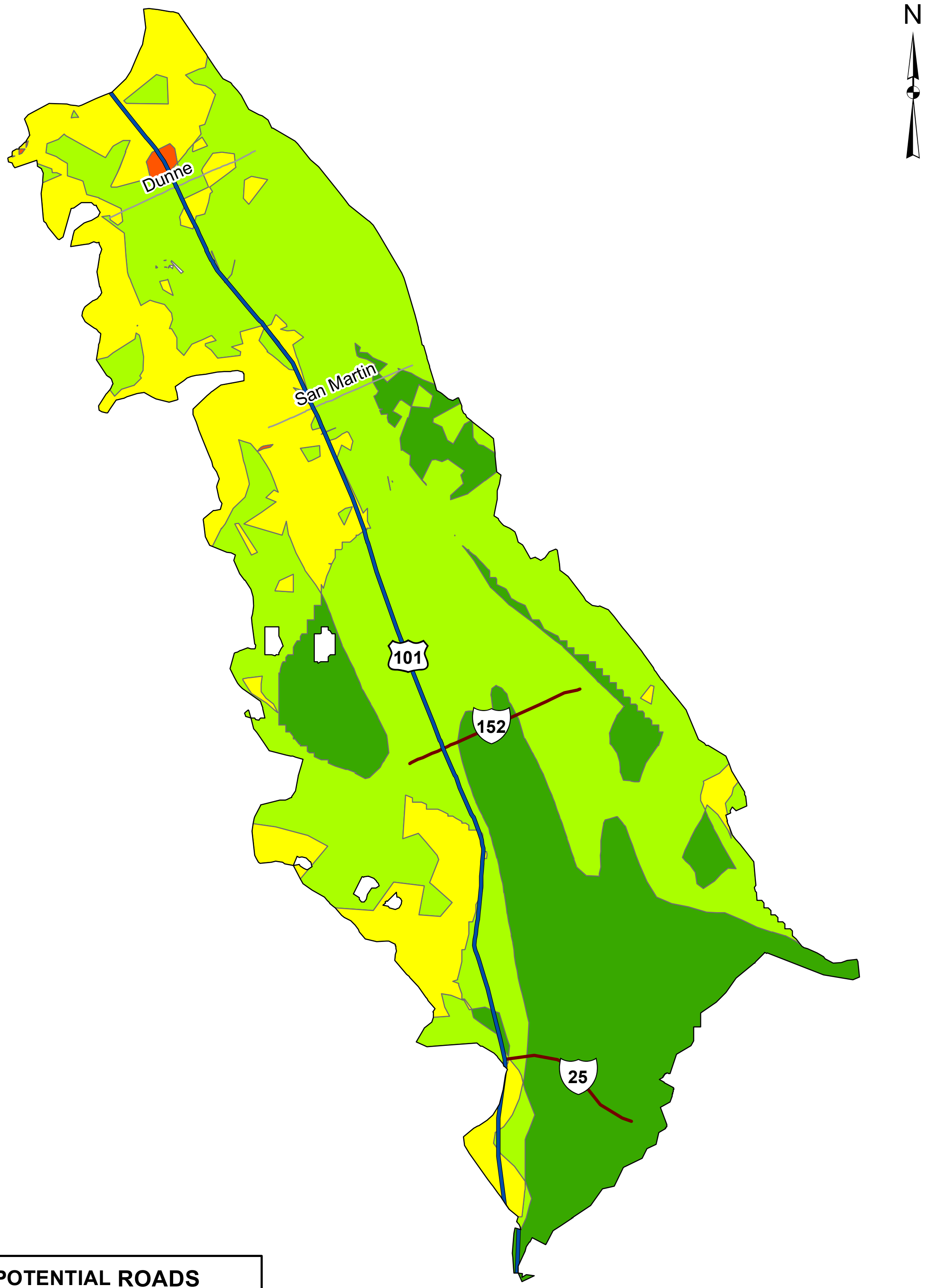
△	08-19-11	ISSUED FOR REPORT	MS	NDW	NDW
NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY

Locus
TECHNOLOGIES

0 0.5 1 2 3 4
Miles

Drawing Number

Figure IV 3-3



GW DEGRADATION POTENTIAL

Range

🟩 1 To 20 Lowest Potential
🟩 21 To 40 Low Potential
🟨 41 To 60 Average Potential
🟧 61 To 80 High Potential
🟥 81 To 100 Highest Potential

ROADS

HWY_TYPE

═ INTERSTATE
— US
— STATE
— ARTERIAL

REFERENCE:

1. BASE MAPPING INFORMATION FROM THE SANTA CLARA VALLEY WATER DISTRICT GIS DEPARTMENT.

GROUNDWATER DEGRADATION POTENTIAL
LLAGAS GROUNDWATER SUBBASIN

PREPARED FOR
SANTA CLARA VALLEY
WATER DISTRICT

NO.	DATE	ISSUE / REVISION	DWN. BY	CK'D BY	AP'D BY
△	08-19-11	ISSUED FOR REPORT	MS	NDW	NDW

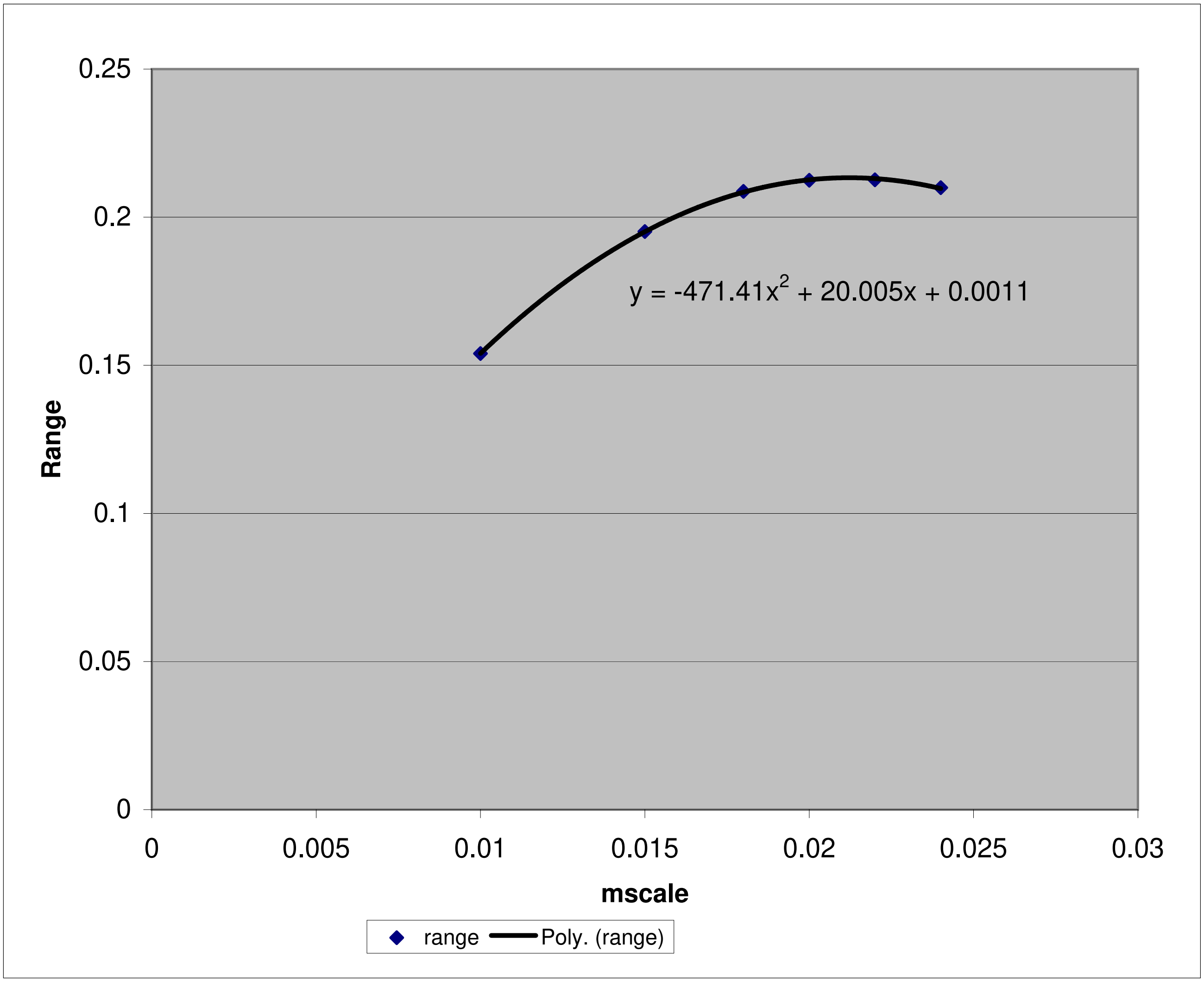
Locus
TECHNOLOGIES

0 0.25 0.5 1 1.5 2
Miles

Drawing Number

Figure IV 3-4

FIGURE IV-3-5
SUBINDEX EXPONENT DERIVATION



mscale value	Range in aggregate indices
0.01	0.153950982
0.015	0.195131597
0.018	0.20873943
0.02	0.212461682
0.022	0.212637299
0.024	0.209943724

Note:
The value of mscale was selected so that the difference between recycled water quality ratings (aggregate indices) would be maximized. The difference between the maximum and minimum aggregate indices was calculated for a range of mscale values as shown in the table above. With respect to mscale, the range varied according to a polynomial trend. The maximum range was observed at an mscale value of 0.021218.

TABLES

TABLE IV-2-1
DERIVATION OF RATINGS FOR DRASTIC DEPTH TO WATER INPUT

Parameter	Value	Comments
Total HAA6 concentration in Recycled Water Source	**6.35625** µg/L	Averaged over course of pilot study
Total HAA6 concentration at 5 feet	**1.53** µg/L	Average of two latest sampling events
Total HAA6 concentration at 10 feet	**0.835** µg/L	Average of two latest sampling events
Total HAA6 concentration at 30 feet	**0.0325** µg/L	Average of two latest sampling events
Percentage Removal at 5 feet	**75.9%**	
Percentage Removal at 10 feet	**86.9%**	
Percentage Removal at 30 feet	**99.5%**	
Ratio of 10-foot to 5-foot attenuation capacity	**1.144**	
Ratio of 30-foot to 5-foot attenuation capacity	**1.310**	
New DRASTIC Depth to Water Rating (5 feet)	**10**	
New DRASTIC Depth to Water Rating (10 feet)	**8.7**	
New DRASTIC Depth to Water Rating (30 feet)	**7.6**	

Sensitivity of Groundwater Data Point
[0.26 J ug/L for Monochloroacetic acid in MW-2 on the eighth sampling event]

Scenario 1: Substitute value for zero (0 ug/L)	Value	Comments
Total HAA6 concentration in Recycled Water Source	6.35625 µg/L	Averaged over course of pilot study
Total HAA6 concentration at 5 feet	1.53 µg/L	Average of two latest sampling events
Total HAA6 concentration at 10 feet	0.835 µg/L	Average of two latest sampling events
Total HAA6 concentration at 30 feet	**0** µg/L	Average of two latest sampling events
Percentage Removal at 5 feet	75.9%	
Percentage Removal at 10 feet	86.9%	
Percentage Removal at 30 feet	100.0%	
Ratio of 10-foot to 5-foot attenuation capacity	1.144	
Ratio of 30-foot to 5-foot attenuation capacity	1.317	
Scenario 1 DRASTIC Depth to Water Rating (5 feet)	10	No change in rating
Scenario 1 DRASTIC Depth to Water Rating (10 feet)	8.7	No change in rating
Scenario 1 DRASTIC Depth to Water Rating (30 feet)	7.6	No change in rating

Scenario 2: Substitute value for reporting limit (2 ug/L)	Value	Comments
Total HAA6 concentration in Recycled Water Source	6.35625 µg/L	Averaged over course of pilot study
Total HAA6 concentration at 5 feet	1.53 µg/L	Average of two latest sampling events
Total HAA6 concentration at 10 feet	0.835 µg/L	Average of two latest sampling events
Total HAA6 concentration at 30 feet	**0.25** µg/L	Average of two latest sampling events
Percentage Removal at 5 feet	75.9%	
Percentage Removal at 10 feet	86.9%	
Percentage Removal at 30 feet	96.1%	
Ratio of 10-foot to 5-foot attenuation capacity	1.144	
Ratio of 30-foot to 5-foot attenuation capacity	1.265	
Scenario 2 DRASTIC Depth to Water Rating (5 feet)	10	No change in rating
Scenario 2 DRASTIC Depth to Water Rating (10 feet)	8.7	No change in rating
Scenario 2 DRASTIC Depth to Water Rating (30 feet)	**7.9**	Slight increase in rating

Notes:

For the purpose of totalling HAA6 concentrations, haloacetic acid concentrations below detection were assumed to be zero.

TABLE IV-2-2
DERIVATION OF RATINGS FOR SOIL MEDIA AND IMPACT OF THE VADOSE ZONE MEDIA INPUTS

Soil Core	SCRWA-B	SCRWA-C	SCRWA-D	SJSC-C	SJSC-D	Comments
Core Description	semifine	coarse	fine (with gypsum)	coarse	fine (with gypsum)	
Core Length	4 feet	4 feet	1 foot	4 feet	1 foot	
Core Soil Type	silt w/sand	well-graded sand and gravel	clay w/sand	poorly graded gravel w/silt and sand	silty clay	
Default DRASTIC S Layer Classification	silty loam	sand loam to sand	massive clay	sand loam to sand	massive clay	
Default DRASTIC I Layer Classification	sand and gravel with significant silt and clay (silt end of this range)	sand and gravel (sand end of this range)	silt/clay (clay end of this range)	sand and gravel (sand end of this range)	silt/clay (clay end of this range)	
Customized I Layer Classification	Between silt and loam	sand	clay	sand	clay	
Total Trihalomethane Concentration Removal	78%	56%	67%	57%	71%	Based on comparison of last effluent sample with first influent sample.
Total Trihalomethane Concentration Removal (adjusted)	31%	18%	67%	19%	71%	Normalized to 1 foot
Ratio of Removal to Sand Removal	1.70	1.00	3.63	1.00	3.78	
New Assigned DRASTIC S Layer Rating	4.1	7	1.9	7	1.9	
New Assigned DRASTIC I Layer Rating	3.5	6	1.7	6	1.6	

TABLE IV-2-3
VERTICAL HYDRAULIC CONDUCTIVITES FOR DIFFERENT SOIL TYPES

Soil Category	Soil Types	Vertical Hydraulic Conductivity (cm/s)	Vertical Hydraulic Conductivity Range (cm/s)
Clay	CL, CH, CH-CL, CH-GP, CL-CH, CL-GC, CL-GP, CL-GW, CL-ML, CL-SC, CL-SM, GC-CL MC, ML-CL, OH, OL, SC, SC-CL, SM-CL, Peat, Clay	10^{-7}	$<2\times10^{-7}$
Silt	ML, MH, ML-GM, ML-SC, ML-SM, ML-SP, ML-SW, SC-ML, SM, SM-GM, SM-ML, SM-SC, SM-SL, SP-SC, GC, GC-GM, GC-SC, GP-CL, Silt	10^{-6}	2×10^{-7} to 2×10^{-6}
Loam	SC-GC, SC-SM, SC-SP, SC-SW, SM-GP, SM-SP, SM-SW, SP-SM, SW-GC, SW-GM, SW-SC, SW-SM, SW-CL, GC-GP, GC-GW, GC-SW, GM, GM-GC, GM-GP, GM-GW, GM-ML, GM-SM, GM-SP, GP-GC, GP-GM, GW-CL, GW-GC, GW-GM, GW-SM, Fill, Soil, Cobbles with Matrix, Gravel with Matrix, Sand with Matrix	10^{-4}	2×10^{-6} to 2×10^{-4}
Sand	SW, SP, SP-SW, SW-SP, GP-SP, GP-SW, GS, GW-SP, GW-SW, SP-GP, SP-GW, SW-GW, Sand	10^{-1}	2×10^{-6} to 2×10^{-1}
Gravel/ Fractured Rock	GW, GP, Gravel, Bedrock, Cobbles, Rock	10^{0}	$> 2\times10^{-1}$

Notes:

Vertical hydraulic conductivity data and range derived from Fetter (1994).

TABLE IV-2-4
CALCULATIONS FOR CALIBRATION OF INPUT WEIGHTINGS

Input	**Input Rating**	**Atten-uation Achieved [%]**	**Δ Rating**	**Δ Atten-uation [%]**	**Δ Rating / Δ Atten-uation**	**Weight-ing [%]**
Depth to Groundwater			-3	63	-0.05	**49**
Baseline Condition: 40 feet	7	78				
Adjusted Condition: 5 feet	10	15				
Soil Media			2	-21	-0.10	**25**
Baseline Condition: Silt	4	78				
Adjusted Condition: Clay	2	99				
Impact of Vadose Zone Media			2	-22	-0.09	**26**
Baseline Condition: Silt	3	78				
Adjusted Condition: Clay	1	100				
Sum						100

Table IV-3-1:
WATER QUALITY OBECTIVE AND ASSIMILATIVE CAPACITY
EVALUATION OF POTENTIAL IMPACTS
RECYCLED WATER STUDY

	Representative Concentration* (mg/L)**			**Regulatory Standards and Guidelines Used for Water Quality Objective (priortized in the given order)**							**Assimilative Capacity (mg/L)**		**Representative Concentration plus 20% of Assmiliative Capacity**** (mg/L)**	
Chemical	**Santa Clara Subbasin**	**Llagas Subbasin**	**Water Quality Objective (mg/L)**	**1. CA MCL (mg/l)**	**2. Federal MCL (mg/l)**	**3. Secondary MCL (mg/l)**	**4. DPH Drinking Water Notification Level (mg/l)**	**5. PHG (CA OEHHA) (mg/L)**	**6. Federal MCLG (mg/L)**	**7. EPA Health Advisory for 10^{-4} Cancer Risk (mg/L)**	**Santa Clara Subbasin**	**Llagas Subbasin**	**Santa Clara Subbasin**	**Llagas Subbasin**
Boron	0.21	0.13	1	NA	NA	NA	1	NA	NA	NA	**0.79**	**0.87**	0.37	0.30
Calcium	62.29	54.94	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	62.29	54.94
Magnesium	30.32	33.82	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	30.32	33.82
Sodium	40.23	35.21	60 **	NA	NA	NA	NA	NA	NA	60 **	**19.77**	**24.79**	44.19	40.17
Sodium Adsorption Ratio (SAR)	1.05	0.92	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	1.05	0.92
Potassium	1.70	1.70	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	1.7	1.7
Sulfate	55.39	43.70	250	NA	NA	250	NA	NA	NA	NA	**194.61**	**206.30**	94.32	84.96
Nitrite	156.4 as NO2	124 as NO2	1 as N	1 as N	1 as N	NA	NA	1 as N	1 as N	NA	0	0	156.4 as NO2	124 as NO2
Nitrate	17.2 as NO3	26.7 as NO3	45 as Nitrate	45 as Nitrate	10 as N	NA	NA	10 as N	10 as N	NA	**27.8 as NO3**	**18.3 as NO3**	22.76 as NO3	30.36 as NO3
Chloride	63.53	44.61	250	NA	NA	250	NA	NA	NA	NA	**186.47**	**205.39**	100.83	85.69
Bromide	0.246	0.246	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	0.246	0.246
Total Organic Carbon (TOC)	0.5	0.5	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	0.5	0.5
Dissolved Organic Carbon	1	1	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	1	1
Bromodichloromethane	0.0005	0.0005	0	NA	NA	NA	NA	NA	0	0.1	0	0	0.0005	0.0005
Bromoform	0.0005	0.0005	0	NA	NA	NA	NA	NA	0	0.8	0	0	0.0005	0.0005
Chloroform	0.0005	0.0005	0.07	NA	NA	NA	NA	NA	0.07	NA	**0.0695**	**0.0695**	0.0144	0.0144
Dibromochloromethane	0.0005	0.0005	0.06	NA	NA	NA	NA	NA	0.06	0.08	**0.0595**	**0.0595**	0.0124	0.0124
Bromochloroacetic Acid	0.001	0.001	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	0.001	0.001
Dibromoacetic Acid	0.001	0.001	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	0.001	0.001
Dichloroacetic Acid	0.001	0.001	0	NA	NA	NA	NA	NA	0	NA	0	0	0.001	0.001
Monobromoacetic Acid	0.001	0.001	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	0.001	0.001
Monochloroacetic Acid	0.002	0.002	0.07	NA	NA	NA	NA	NA	0.07	NA	**0.068**	**0.068**	0.0156	0.0156
Trichloroacetic Acid	0.001	0.001	0.02	NA	NA	NA	NA	NA	0.02	NA	**0.019**	**0.019**	0.0048	0.0048
HAA5	NA	NA	0.06	0.06	0.06	NA	NA	NA	NA	NA	0	0	NA	NA
Coliforms, Total	13%	13%	5%	NA	5%	NA	NA	NA	0	NA	0	0	13%	13%
Fecal Coliforms	1%	1%	0	NA	NA	NA	NA	NA	0	NA	0	0	1%	1%
E. Coli	1%	1%	0	NA	NA	NA	NA	NA	0	NA	0	0	1%	1%
N-Nitroso Dimethylamine (NDMA)	0.000002	0.000002	0.00001	NA	NA	NA	0.00001	0.000003	NA	0.00007	**0.000008**	**0.000008**	0.0000036	0.0000036
Perchlorate	0.004	0.004	0.006	0.006	NA	NA	NA	0.006	NA	NA	**0.002**	**0.002**	0.0044	0.0044
Cyanide	0.01	0.01	0.15	0.15	0.2	NA	NA	0.15	0.2	NA	**0.14**	**0.14**	0.038	0.038
PFOS	0.000005	0.000005	0.0002 *	NA	NA	NA	NA	NA	NA	0.0002 *	**0.000195**	**0.000195**	0.000044	0.000044
PFOA	0.000005	0.000005	0.0004 *	NA	NA	NA	NA	NA	NA	0.0004 *	**0.000395**	**0.000395**	0.000084	0.000084
Phosphate	0.0395	0.0395	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	0.0395	0.0395
Nitrilotriacetic acid (NTA)	0.1	0.1	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	0.1	0.1
Ethylenediaminetetraacetic acid (EDTA)	0.1	0.1	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	0.1	0.1
Surfactants (MBAS)	0.2	0.2	0.5	NA	NA	0.5	NA	NA	NA	NA	**0.3**	**0.3**	0.26	0.26
Terbuthylazine	0.1	0.1	NONE	NA	NA	NA	NA	NA	NA	NA	0	0	0.1	0.1

Notes:
Bold indicates some assimilative capacity.
* Provisional short term value.
** Maximum taste threshold.
*** Deriviation found in Table IV-3-2. Typical reporting limits used where data was not available.
**** Values are used in Table IV-3-2.

Table IV-3-2:
SUMMARY OF RECYCLED WATER AND BASELINE GROUNDWATER DATA
EVALUATION OF POTENTIAL IMPACTS
RECYCLED WATER STUDY

Parameter	Units	Typical Reporting Limit[1]	Current Baseline Groundwater Data								Pilot Study Threat	Recycled Water Data[6]									
			Overall Study Area[7]		Santa Clara Subbasin		Llagas Subbasin		Representative Concentration plus 20% Assimilative Capacity[3]			PARWQCP		SCRWA		SJ/SC WPCP		SWPCP		Overall Recycled Water Quality[8]	
			Mean[2]	Count	Mean[2]	Count	Mean[2]	Count	Santa Clara	Llagas		Mean	Count	Mean	Count	Mean	Count	Mean	Count	Min	Max
Biological[4]																					
Coliforms, Total	%		13%	23					13%	13%	3	67%	3	67%	9	60%	15	20%	5	20%	67%
E. Coli	%		0%	9					1%	1%	3	0%	3	0%	7	7%	15	20%	5	0%	20%
Fecal Coliforms	%		0%	9					1%	1%	3	0%	3	0%	7	27%	15	20%	5	0%	20%
Heterotrophic Plate Count[5]	CFU/mL		491	23					493	493	3	1957	3	8478	7	20052	15	2827	5	ND	64000
Inorganics																					
Boron	µg/L	100	196	1815	211.6	1441	134.8	374	368	304	3	331	3	403	5	449	15	409	5	321	505
Bromide	mg/L	0.02	0.25	653					0.25	0.25	2	0.23	0	0.00	2	0.23	10	0.23	0	ND	0.38
Calcium	mg/L	0.5	61.5	5813	62.3	5213	54.9	600	62.3	54.9	2	46.8	3	50.5	7	53.9	16	52.0	6	44	69
Chloride	mg/L	1	61.9	6837	63.5	6232	44.6	605	101.0	85.7	4	288	3	175	7	204	16	238	5	119	320
Magnesium	mg/L	0.5	30.7	5785	30.3	5193	33.8	592	30.3	33.8	2	34.7	3	30.6	7	29.6	15	38.4	5	25	42
Nitrate as NO3	mg/L	0.05 as N	23.5	14772	17.3	5002	26.7	9770	22.8	30.4	2	104	3	11	7	44	16	54	5	7.5	122
Nitrite as NO2	mg/L	0.05 as N	124	1571	156.4	1249	ND	322	156	124	2	ND	3	ND	7	1.94	15	0.08	5	ND	5.59
Phosphate	mg/L	0.03 as P	0.040	19					0.040	0.040	1	13	3	10.4	7	1.2	15	10.2	5	0.2	14
Potassium	mg/L	0.5	1.7	5246					1.7	1.7	1	15	0	30	2	15.0	10	15	0	12	32
Sodium	mg/L	0.5	39.7	5798	40.23	5193	35.21	605	44.2	40.2	4	215	3	139	7	147	16	177	5	118	230
Sodium Adsorption Ratio (SAR)	unitless		1.03	NA	1.05	NA	0.92	NA	1.05	0.92	4	5.80	NA	3.80	NA	3.99	NA	4.54	NA	3.53	5.38
Sulfate	mg/L	0.5	54.1	5915	55.39	5274	43.70	641	94.3	85.0	3	97	3	72	7	99	15	137	5	60	247
Total Filterable Residue at 180C (TDS)	mg/L	10	456.59	3872					465	465	3	864	3	676	7	735	16	841	5	630	1000
Emerging Contaminants and DBPs																					
N-Nitroso Dimethylamine (NDMA)	ng/L	2	ND	28					3.6	3.6	5	261	3	3	6	271	14	50	4	ND	490
Perfluorochemicals (PFBA)	ng/L	20	ND	4					20	20	5	1.2	0	0	2	1.2	10	1.2	0	ND	12
Perfluorochemicals (PFOS)	ng/L	5	ND	4					44.0	44.0	5	44.0	0	0	2	44.0	10	44.0	0	ND	87
Perfluorochemicals (PFOA)	ng/L	5	ND	4					84.0	84.0	5	61.9	0	20	2	61.9	10	61.9	0	ND	109
HAA6	µg/L	1	0.34	13					1.0	1.0	4	61		99		51		40			
Dibromoacetic Acid	µg/L	1	0.04	45					1.0	1.0	4	24.7	3	1.1	5	2.0	16	9.2	5	ND	30
Dichloroacetic Acid	µg/L	1	ND	46					1.0	1.0	4	14.6	3	36.1	5	16.9	16	12.1	5	ND	80
Trichloroacetic Acid	µg/L	1	ND	46					4.8	4.8	4	16.5	3	47.7	5	20.2	16	16.8	5	ND	124
Monobromoacetic Acid	µg/L	1	ND	13					1.0	1.0	4	4.1	3	0.7	6	1.3	16	1.2	5	ND	6.9
Monochloroacetic Acid	µg/L	2	ND	13					15.6	15.6	4	1.1	2	4.6	5	3.6	16	1.2	4	ND	21
Bromochloroacetic Acid	µg/L	1	0.42	13					1.0	1.0	4	20.8	2	8.6	2	7.0	15	8.6	4	ND	37
Total THMs	µg/L		0.096	5491	0.10	4729	0.076	762	16.10	16.10	2	170		115		53		196			
Bromodichloromethane	µg/L	0.5	0.010	10592	0.011	8965	0.002	1627	0.50	0.50	2	41.1	4	33.6	8	19.5	15	67.2	5	2.5	95
Bromoform	µg/L	0.5	0.019	7138	0.019	5979	0.021	1159	0.50	0.50	2	43.0	4	0.8	8	1.4	14	17.4	5	ND	61
Chloroform	µg/L	0.5	0.049	7191	0.046	6031	0.064	1160	14.40	14.4	2	13.6	4	68.8	8	22.5	14	42.5	5	2.7	95
Dibromochloromethane	µg/L	0.5	0.014	7068	0.016	5925	0.006	1143	12.40	12.4	2	72.0	4	11.9	8	9.7	14	69.0	5	0.8	115
General Water Quality Parameters																					
Alkalinity, Total as CaCO3	mg/L	1 as CaCO3	237	5549	238.9	5039	214.1	510	239	214	1	88	3	251	7	179	17	124	6	65.0	263
Bicarbonate Alkalinity	mg/L	1 as CaCO3	258	1802	274.4	1336	212.5	466	274	212	1	98	3	296	7	207	21	142	9	77.0	320
Chlorine, Total	mg/L	0.01	1.5	4					2.0	2.0	1	3.8	1	1.0	3	1.0	11	2.5	1	0.000	8.8
Dissolved Organic Carbon	mg/L	1	0.6	4					1.0	1.0	2	6.3	1	5.1	1	6.0	12	9.0	1	4.1	9.0
Dissolved Oxygen	mg/L		0.0038	4					0.0038	0.0038	1	5.0	0	8.6	2	5.0	10	5.0	0	0.04	8.7
ORP	mV		183	4					183	183	1	155	0	224	2	155	9	155	0	78.0	417
pH	pH Units		8.66	8729	8.96	6968	7.50	1761	8.7	7.5	1	7.10	4	7.59	6	7.33	18	7.03	6	6.5	8.1
Total Organic Carbon (TOC)	mg/L	0.5	0.36	23					0.50	0.50	2	6.22	3	4.94	7	6.46	15	8.25	5	4.0	10
Parameters with Low Occurrence in the Pilot Study																					
Cyanide	mg/L	0.01	0.000455	1059	0.00050	897	0.00022	162	0.04	0.04	3	ND	2	0.0008	6	0.01	14	ND	4	ND	0.06
Ethylenediaminetetraacetic acid (EDTA)	µg/L	100	3.48	15					100	100	3	26	0	196	4	26	12	18	2	ND	305
NTA	µg/L	100	ND	4					100	100	3	ND	0	ND	2	ND	3	ND	0	ND	ND
Perchlorate	µg/L	4	0.71	2223	0.036	509	0.91	1714	4.0	4.0	3	ND	0	ND	2	ND	3	ND	0	ND	ND
Surfactants (MBAS)	mg/L	0.2	0.0001	2356					0.3	0.26	3	0.13	2	0.11	6	0.08	5	0.16	4	ND	0.36
Terbuthylazine	µg/L	0.1	ND	4					0.1	0.10	3	0.10	1	ND	3	0.02	11	ND	1	ND	0.10

Notes:

1. Typical Reporting Limit from the bench test and pilot study data
2. For the purpose of calculating mean values, nondetects were evaluated as zero. "ND" is reported for the mean if all values are nondetect.
3. Basin-specific concentrations are used where there are a sufficient number of data to support quantification in each basin. Otherwise, the mean for the entire study area is applied to both basins. Where the groundwater data mean is below the typical reporting limit, the reporting limit was used. Additionally, 20 percent of the assimilative capacity as derived in Table 3-1 is included in these concentrations.
4. Total/Fecal Coliforms and E.Coli are presented in this table as frequency of detection rather than mean.
5. Heterotrophic plate count results were not used for this analysis, because there is limited accuracy with this analysis. Biologicals are adequately represented by the other biological parameters.
6. Mean values for recycled water sampled from each treatment plant. For PARWQCP and SWPCP where no data are available (count listed as 0), the concentration observed in SJSC WPCP is used as a surrogate.
7. Data includes groundwater data from the SCVWD database up to 2007, pilot study baseline, and the GAMA program.
8. Minimum and maximum is determined using data from all four treatment plant data.

NA - No data available.
Non-detects treated as zero concentration.
mg/L - milligrams per liter
µg/L - micrograms per liter
ng/L - nanograms per liter
MPN/100mL - most probable unit per 100 mL
CFU/mL - colony forming units per milliliter

Table IV-3-3:
RECYCLED WATER QUALITY RATING CALCULATION
EVALUATION OF POTENTIAL IMPACTS
RECYCLED WATER STUDY

		q/q_c						s						$s^{(-1/k)}$					
Parameter	**m**	**PARWQCP**	**SCRWA**	**SJ/SC WPCP**	**SWPCP**	**GROUND WATER**	**MAX**	**PARWQCP**	**SCRWA**	**SJ/SC WPCP**	**SWPCP**	**GROUND WATER**	**MAX**	**PARWQCP**	**SCRWA**	**SJ/SC WPCP**	**SWPCP**	**GROUND WATER**	**MAX**
Biological																			
Coliforms, Total	0.127	4.154	4.128	3.615	0.538	0.000	4.128	0.812	0.812	0.823	0.947	1.000	0.812	2.942	2.933	2.736	1.328	1.000	2.933
E. Coli	0.127	0.000	0.000	5.667	19.000	0.000	19.000	1.000	1.000	0.785	0.683	1.000	0.683	1.000	1.000	3.486	7.183	1.000	7.183
Fecal Coliforms	0.127	0.000	0.000	25.667	19.000	0.000	19.000	1.000	1.000	0.658	0.683	1.000	0.683	1.000	1.000	8.681	7.183	1.000	7.183
Inorganics																			
Boron	0.127	0.000	0.326	0.221	0.110	0.000	0.372	1.000	0.965	0.975	0.987	1.000	0.961	1.000	1.204	1.140	1.071	1.000	1.232
Bromide	0.042	0.000	0.000	0.000	0.000	0.000	0.545	1.000	1.000	1.000	1.000	1.000	0.982	1.000	1.000	1.000	1.000	1.000	1.100
Calcium	0.042	0.000	0.000	0.000	0.000	0.000	0.111	1.000	1.000	1.000	1.000	1.000	0.996	1.000	1.000	1.000	1.000	1.000	1.023
Chloride	0.255	1.851	1.042	1.017	1.360	0.000	2.168	0.766	0.834	0.836	0.804	1.000	0.746	3.972	2.559	2.519	3.097	1.000	4.563
Magnesium	0.042	0.143	0.000	0.000	0.266	0.000	0.392	0.994	1.000	1.000	0.990	1.000	0.986	1.030	1.000	1.000	1.053	1.000	1.075
Nitrate as NO3	0.042	3.580	0.000	0.946	1.384	0.000	4.360	0.937	1.000	0.972	0.964	1.000	0.931	1.396	1.000	1.157	1.210	1.000	1.445
Nitrite as NO2	0.042	0.000	0.000	0.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Phosphate	0.000	328.114	261.582	28.167	258.190	0.000	356.658	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Potassium	0.000	7.829	16.353	7.829	7.829	0.000	17.824	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Sodium	0.255	3.862	2.452	2.320	2.999	0.000	4.204	0.669	0.729	0.737	0.703	1.000	0.657	8.019	5.108	4.853	6.200	1.000	8.768
Sodium Adsorption Ratio (SAR)	0.255	4.552	3.128	2.813	3.338	0.000	4.143	0.646	0.697	0.711	0.688	1.000	0.659	9.549	6.465	5.823	6.901	1.000	8.634
Sulfate	0.127	0.024	0.000	0.051	0.449	0.000	1.619	0.997	1.000	0.994	0.954	1.000	0.885	1.016	1.000	1.034	1.277	1.000	1.885
Emerging Contaminants and DBPs																			
N-Nitroso Dimethylamine (NDMA)	0.424	71.500	0.000	74.357	12.958	0.000	135.111	0.162	1.000	0.160	0.327	1.000	0.124	12063.214	1.000	13130.729	324.857	1.000	48042.602
Perfluorochemicals (PFBA)	0.424	0.000	0.000	0.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Perfluorochemicals (PFOS)	0.424	0.000	0.000	0.000	0.000	0.000	0.977	1.000	1.000	1.000	1.000	1.000	0.749	1.000	1.000	1.000	1.000	1.000	4.462
Perfluorochemicals (PFOA)	0.424	0.000	0.000	0.000	0.000	0.000	0.298	1.000	1.000	1.000	1.000	1.000	0.895	1.000	1.000	1.000	1.000	1.000	1.771
HAA6																			
Dibromoacetic Acid	0.255	23.733	0.140	0.969	8.180	0.000	29.300	0.442	0.967	0.842	0.569	1.000	0.420	68.244	1.188	2.439	18.512	1.000	89.149
Dichloroacetic Acid	0.255	13.600	35.120	15.875	11.120	0.000	79.400	0.505	0.401	0.487	0.530	1.000	0.327	34.096	112.347	41.257	26.686	1.000	322.111
Trichloroacetic Acid	0.255	2.431	8.938	3.199	2.500	0.000	24.833	0.731	0.557	0.694	0.727	1.000	0.437	5.067	20.548	6.610	5.202	1.000	72.267
Monobromoacetic Acid	0.255	3.133	0.000	0.313	0.240	0.000	5.900	0.697	1.000	0.933	0.947	1.000	0.612	6.476	1.000	1.430	1.327	1.000	12.712
Monochloroacetic Acid	0.255	0.000	0.000	0.000	0.000	0.000	0.372	1.000	1.000	1.000	1.000	1.000	0.923	1.000	1.000	1.000	1.000	1.000	1.516
Bromochloroacetic Acid	0.255	19.800	7.575	6.000	7.600	0.000	35.900	0.462	0.579	0.609	0.578	1.000	0.399	54.331	16.923	12.956	16.988	1.000	115.551
Total THMs																			
Bromodichloromethane	0.042	81.200	66.275	38.040	133.480	0.000	189.000	0.829	0.836	0.856	0.812	1.000	0.800	2.631	2.518	2.234	2.931	1.000	3.162
Bromoform	0.042	84.900	0.500	1.784	33.760	0.000	121.000	0.828	0.983	0.957	0.860	1.000	0.816	2.656	1.093	1.252	2.178	1.000	2.869
Chloroform	0.042	0.000	3.780	0.559	1.951	0.000	5.597	1.000	0.936	0.981	0.955	1.000	0.923	1.000	1.410	1.102	1.268	1.000	1.513
Dibromochloromethane	0.042	4.804	0.000	0.000	4.568	0.000	8.274	0.928	1.000	1.000	0.930	1.000	0.910	1.471	1.000	1.000	1.457	1.000	1.630
General Water Quality Parameters																			
Dissolved Organic Carbon	0.042	5.300	4.100	4.992	8.000	0.000	8.000	0.925	0.933	0.927	0.911	1.000	0.911	1.498	1.430	1.481	1.619	1.000	1.619
Total Organic Carbon (TOC)	0.042	11.433	8.871	11.920	15.504	0.000	18.240	0.899	0.907	0.897	0.888	1.000	0.882	1.738	1.653	1.753	1.850	1.000	1.913
Parameters with Low Occurrence in the Pilot Study																			
Cyanide	0.127	0.000	0.000	0.000	0.000	0.000	0.526	1.000	1.000	1.000	1.000	1.000	0.948	1.000	1.000	1.000	1.000	1.000	1.321
Ethylenediaminetetraacetic acid (EDTA)	0.127	0.000	0.963	0.000	0.000	0.000	2.050	1.000	0.918	1.000	1.000	1.000	0.868	1.000	1.559	1.000	1.000	1.000	2.083
NTA	0.127	0.000	0.000	0.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Perchlorate	0.127	0.000	0.000	0.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Surfactants (MBAS)	0.127	0.000	0.000	0.000	0.000	0.000	0.373	1.000	1.000	1.000	1.000	1.000	0.960	1.000	1.000	1.000	1.000	1.000	1.232
Terbuthylazine	0.127	0.000	0.000	0.000	0.000	0.000	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
													SUM	12288.346	200.936	13251.674	456.380	37.000	48733.509
							Additional Parameters:						Aggregate Index, I (per Swamee)	0.162	0.372	0.160	0.311	1.000	0.124
							N=	37					Modified Aggregate Index, 1 – I (per Locus)	0.838	0.628	0.840	0.689	0.000	0.876
							k=	0.193426404					Recycled Water Quality	**9.61**	**7.45**	**9.63**	**8.08**		
							mscale=	0.02121826											

Volume V
Proposed Recycled Water Irrigation Screening Levels, Best Management Practices, and Ongoing Monitoring Recommendations

Recycled Water Irrigation and Groundwater Study
Santa Clara and Llagas Groundwater Subbasins
Santa Clara County, California

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TABLE OF CONTENTS

LIST OF TABLES .... V-iii
LIST OF ACRONYMS AND ABBREVIATIONS .... V-iv
EXECUTIVE SUMMARY V-ES-1

1. INTRODUCTION 1
   1.1. Purpose 1

2. DEVELOPMENT OF PROPOSED RECYCLED WATER IRRIGATION SCREENING LEVELS 3
   2.1. Methodology 4
      2.1.1. Groundwater Degradation Potential 5
      2.1.2. Soil Aquifer Treatment Capacity 6
      2.1.3. Recycled Water Quality Rating and Aggregate Index 6
      2.1.4. Subindices, Groundwater Quality, and Subindex Exponent 7
      2.1.5. Proposed Recycled Water Irrigation Screening Level 8
   2.2. Assumptions 9
   2.3. Limitations 9

3. BEST MANAGEMENT PRACTICES 11
   3.1. Improve Recycled Water Quality 11
   3.2. Fertilizer Use 12
   3.3. Site Selection 14
      3.3.1. Potential Contamination Sources 15
      3.3.2. Screening Method 15
   3.4. Irrigation Effectiveness 16
      3.4.1. Appropriate Irrigation Needs 17
      3.4.2. Efficient Irrigation System 18
      3.4.3. Time of Operation 18
   3.5. Salt and Nutrient Management Plan 19
   3.6. Gypsum Use 19

4. ONGOING MONITORING RECOMMENDATIONS 21
   4.1. Groundwater Monitoring 22
      4.1.1. Locations 22
      4.1.2. Frequency 24
   4.2. Recycled Water Sampling 26
      4.2.1. Frequency 26
      4.2.2. Number of Monitoring Points 26

4.3. Constituent List....27
4.4. Quality Control Samples....28

REFERENCES **30**

TABLES
APPENDICES
ACRONYMS AND ABBREVIATIONS

LIST OF TABLES

TABLE NO.	TITLE
V-2-1	Proposed Recycled Water Irrigation Screening Levels
V-4-1	List of Recycled Water Constituents to Monitor

LIST OF ACRONYMS AND ABBREVIATIONS

ACRONYM	**DESCRIPTION**
AAI	All appropriate inquiries
ASTM	American Society for Testing and Material
BMP	best management practice
GAMA	Groundwater Ambient Monitoring and Assessment
Locus	Locus Technologies
NDMA	n-nitrosodimethylamine
PARWQCP	Palo Alto Regional Water Quality Control Plant
PRWISL	Proposed recycled water irrigation screening level
RWQ	Recycled water quality
RWQCB	Regional Water Resources Control Board
SAR	Sodium Adsorption Ratio
SAT	Soil Aquifer Treatment
SCRWA	South County Regional Wastewater Authority
SCVWD	Santa Clara Valley Water District
SJ/SC WPCP	San Jose/Santa Clara Water Pollution Control Plant
SWPCP	Sunnyvale Water Pollution Control Plant
SWRCB	State Water Resources Control Board

EXECUTIVE SUMMARY

Volume V, prepared by Locus Technologies (Locus) on behalf of the Santa Clara Valley Water District (SCVWD), covers the final phase of the Recycled Water Irrigation and Groundwater Study. The overall goal of the study is to evaluate the potential impact to groundwater from expanded use of recycled water for irrigation in the Santa Clara and Llagas Subbasins (study area). The scope of this portion of the report is to establish guidance for the use of recycled water in irrigation in the study area in a manner that sustainably protects groundwater from this particular use. This includes the development of proposed recycled water irrigation screening levels (PRWISLs), best management practices (BMPs), and ongoing monitoring recommendations for recycled water and groundwater.

Proposed Recycled Water Irrigation Screening Levels

In conjunction with best management practices and ongoing monitoring recommendations, proposed recycled water irrigation screening levels (PRWISLs) are developed for recycled water irrigation aimed at protecting groundwater sources in the study area. The function of the PRWISLs is to provide guidance on threshold concentrations of constituents in recycled water for the given soil aquifer treatment (SAT) zone. For this study, the PRWISL is defined as the maximum concentration of a recycled water constituent for irrigation at which minimal groundwater degradation potential can be achieved.

Recycled water concentrations higher than the PRWISLs will always result in greater than minimal groundwater degradation potential. However, a recycled water quality that meets all the PRWISLs does not necessarily indicate minimal groundwater degradation potential because the PRWISL of each constituent assumes there is no contribution to the GWDP from the other constituents. To quantify the GWDP, the forward evaluation for determining the groundwater degradation potential as discussed in Volume IV must be performed.

PRWISLs vary within the study area based on the soil aquifer treatment capacity and representative groundwater quality. The PRWISLs also consider the constituent's threat level determined from the pilot study and bench test in previous phases of this study. To determine proposed recycled water irrigation screening levels for recycled water irrigation, an inverse calculation approach was used from the methodology developed for determining the groundwater degradation potential. By constraining the groundwater degradation potential to an assumed target maximum acceptable level, which is numerically 20 for the lowest groundwater degradation potential, an analysis can be performed to compute the maximum recycled water concentration for each constituent that will result in the target groundwater degradation potential. Proposed recycled water irrigation screening levels are shown in Table V-2-1 and are established for each soil aquifer treatment zone and subbasin.

Best Management Practices

Best management practices (BMPs) are recommendations to maintain optimal use of recycled water for irrigation while protecting groundwater. BMPs evaluated in this report are specific to recycled water use as an irrigation source for landscape with the goal of minimizing the degradation of groundwater resources. BMPs that may affect groundwater degradation potential with respect to recycled water include practices such as dilution, fertilizer application, site selection, irrigation optimization, and gypsum application. Dilution may be an appropriate measure for areas where the quality of the recycled water is above proposed recycled water irrigation screening levels. In addition, source control or modifications of treatment processes may also be options for reducing the groundwater degradation potential. Reduced fertilizer application can minimize potential impacts of migration of nutrients found in recycled water to groundwater. Careful selection of sites for recycled water application is important to avoid the mobilization of other contamination sources that may be present onsite. Optimizing the irrigation system minimizes the total volume of irrigation needed for application and consequently minimizes the mass load of recycled water constituents applied. Gypsum application can promote soil drainage which is important for maintenance of landscaping, as well as preventing water logging and possible runoff of recycled water to surface waters. However, it also accelerates migration of recycled water constituents to groundwater. Therefore, its use needs to be carefully balanced.

Ongoing Monitoring Recommendations

Recommendations for ongoing monitoring were developed to monitor the potential long term impacts to groundwater from use of recycled water for irrigation in the Santa Clara and Llagas Subbasins. The goal of the ongoing monitoring is to provide timely recognition of any adverse changes in groundwater quality due to application of recycled water. This monitoring schedule serves as a general guideline for monitoring activities. Future deviations from this monitoring schedule may be appropriate to optimize this program.

Site-specific data can be used to directly calculate the groundwater degradation potential to help determine if additional monitoring is needed. The use of this data, along with available groundwater monitoring results from areas with similar physical and recycled water quality characteristics may reduce the need for additional monitoring.

If additional monitoring is needed within the area of current or planned recycled water irrigation, the location of monitoring wells should be prioritized to areas of highest groundwater degradation potential as shown on Figures IV-3-3 and IV-3-4 of Volume IV of this report.

The following is a summary of proposed criteria for achieving adequate monitoring:

1) Select or install wells at or adjacent to sites where recycled water irrigation is implemented. Monitoring wells should be downgradient of the application area.

2) While not every irrigation site needs to be monitored, at least one should be monitored to represent each region of expansion with similar calculated GWDP values. If a region of expansion contains different rating categories of GWDP, consider monitoring an irrigation site in each unique subregion.

3) Monitoring wells located between application areas and production wells will be useful in monitoring water quality that may affect production.

4) Monitor for the groundwater of interest (i.e. in the principal aquifer) and in shallower aquifers. Shallower aquifers can provide an early indication of changes in water quality.

5) Avoid monitoring wells that are screened in multiple aquifers, since samples would effectively be an average groundwater concentration across multiple aquifers.

6) Use denser monitoring well spacing in areas of higher GWDP where groundwater degradation is most likely to occur.

Groundwater monitoring is recommended at the following frequency guideline, which also varies depending on the groundwater degradation potential. The monitoring frequencies were developed based on observations from the pilot study phase of this study.

Highest Groundwater Degradation Potential in Represented Area	Monitoring Frequency		
	Year 1	Year 2-4	Year 5 and beyond
1-20	Quarterly	Semi-annually in spring and fall	Annually in fall
21-40	Quarterly	Quarterly	Semi-annually in spring and fall
41-60	Monthly	Quarterly	Semi-annually in spring and fall
61-100	Monthly	Quarterly	Quarterly

After a period of monitoring events, if evaluation of the data demonstrates that the quality of groundwater has not degraded past 20 percent of the assimilative capacity and does not show an increasing trend, the groundwater monitoring scope may be reduced in frequency or in the number of wells monitored. The schedule is designed to allow for more frequent observations in the beginning of implementation of expanded use of recycled water. This ensures that if groundwater degradation occurs as a result of recycled water use, it will be detected early. Conversely, the monitoring scope can be increased in frequency or number of wells if adverse impacts are encountered.

Recycled water monitoring is recommended for wastewater treatment plants in order to verify that recycled water quality does not change over time. If recycled water quality worsens over time, additional measures, such as additional treatment, source control, or dilution as specified in the BMPs should be implemented in order to maintain the same level of groundwater protection. During this study, recycled water concentrations were observed to be relatively consistent over time when sampled at the same location. Annual monitoring of recycled water is recommended from each treatment plant that provides recycled water for irrigation use. Additional sampling events should also be scheduled following any change in the treatment process. During this study, constituent concentrations in recycled water were observed to vary within the distribution system. Therefore, it is recommended that samples be collected at various points in the distribution system to evaluate the quality of recycled water being applied for irrigation. Samples should be collected at the irrigation site closest to the recycled water source, and at the irrigation site furthest from the recycled water source. Additional samples within the distribution system may be warranted based on size of the distribution system. Note that as the recycled water distribution systems are expanded, sampling locations may need to be revised or added over time.

A list of the constituents to be analyzed for future monitoring is presented in Table V-4-1. The list contains constituents of recycled water that were determined by this study to be of concern with regard to adverse impacts to groundwater. The list of constituents may be revised if it is suitably demonstrated that one or more of the constituents is consistently below detection in the recycled water source. The constituent should be below detection in all samples collected from the distribution system. All constituents should continue to be monitored in the recycled water source. In addition, this list of constituents may be adapted in the future to include new contaminants in recycled water that are identified and determined to have merit for monitoring.

The monitoring approach, including constituents monitored and monitoring frequency, may be revised as more site-specific data becomes available. To date, there is limited field-scale data on long-term impacts to groundwater from recycled water application, particularly for some of the constituents of concern. With additional data from further studies, revisions to this monitoring approach should be evaluated with consideration of the applicability of the new data to recycled water application within the study area.

VOLUME V
PROPOSED RECYCLED WATER IRRIGATION SCREENING LEVELS, BEST MANAGEMENT PRACTICES, AND ONGOING MONITORING RECOMMENDATIONS

1. INTRODUCTION

This report was prepared by Locus Technologies (Locus) on behalf of the Santa Clara Valley Water District (SCVWD) for the Recycled Water Irrigation and Groundwater Study. Volume V of this report covers proposed recycled water irrigation screening levels (PRWISLs), best management practices (BMPs), and ongoing monitoring recommendations. This volume focuses on the last phase of this study which is guidance for use of recycled water in irrigation in the study area in a manner that sustainably protects groundwater from this particular use. Protecting groundwater means ensuring that negative impacts of recycled water for irrigation in groundwater are minimized.

1.1. Purpose

This volume of the report includes proposed recycled water irrigation screening levels (PRWISLs), best management practices (BMPs), and ongoing monitoring recommendations. PRWISLs are maximum tolerable concentrations of recycled water constituents in irrigation water. BMPs are effective and practical methods for using recycled water in irrigation that aim to protect to groundwater quality. These BMPs were developed with two major considerations in mind: 1) to protect groundwater resources and 2) to maintain recycled water as a viable source for irrigation. Ongoing monitoring recommendations are established to maintain proposed recycled water irrigation screening levels in the irrigation water and preemptively identify potential effects to groundwater. Together, RSWLs, BMPs, and ongoing monitoring recommendations aim to minimize groundwater degradation from recycled water irrigation. The following goals were identified for Volume V:

- Define proposed recycled water irrigation screening levels for recycled water constituents.
- Establish best management practices for sustainable use of recycled water as an irrigation source with regard to protection of groundwater.
- Specify ongoing monitoring provisions to track irrigated recycled water and groundwater at implemented areas.

2. DEVELOPMENT OF PROPOSED RECYCLED WATER IRRIGATION SCREENING LEVELS

Proposed recycled water irrigation screening levels (PRWISLs) were developed for irrigation to protect groundwater sources in the study area, in conjunction with BMPs and ongoing monitoring recommendations. For this study, the PRWISL is defined as the maximum concentration of a recycled water constituent present in irrigation water at which minimal groundwater degradation potential can be achieved. Recycled water concentrations higher than the PRWISLs will always result in greater than minimal groundwater degradation potential. However, a recycled water quality that meets all the PRWISLs does not necessarily indicate minimal groundwater degradation potential because the PRWISL of each constituent assumes there is no contribution to the GWDP from the other constituents. To quantify the GWDP, the forward evaluation for determining the groundwater degradation potential as discussed in Volume IV must be performed. Recalculation of the GWDP is useful whenever there are changes in the recycled water quality..

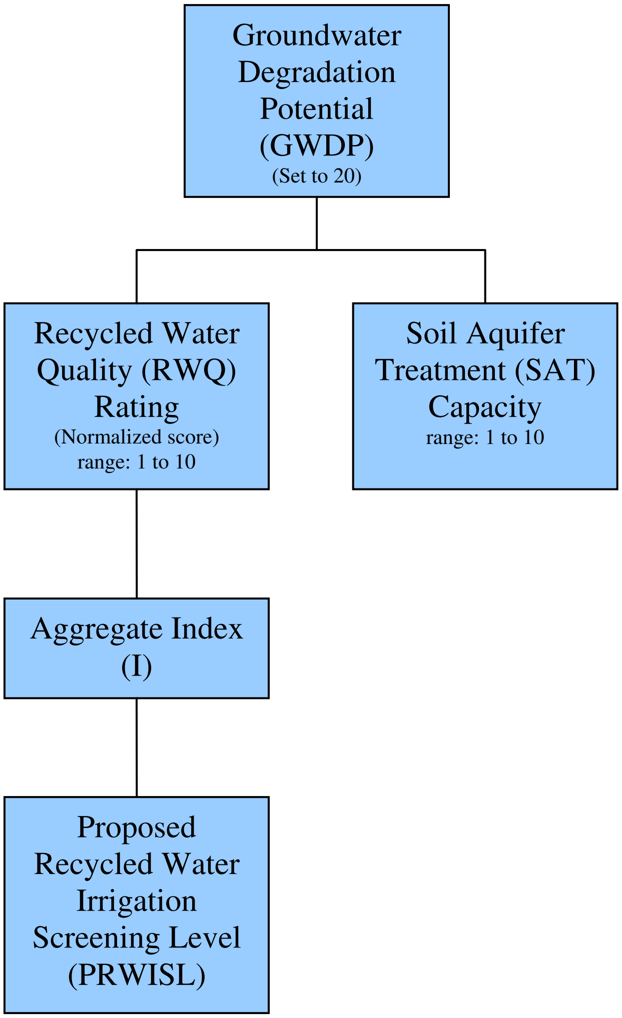
The PRWISLs vary within the study area based on the soil aquifer treatment capacity of a given area and the representative groundwater quality. The PRWISLs also consider the constituent's threat level as determined in Volume III of this study. The PRWISL of a given constituent is determined by assuming that the other recycled water constituent concentrations are equal to or less than the representative groundwater quality. The PRWISL of a single constituent represents the maximum tolerable concentration at which the target groundwater degradation potential can no longer be achieved regardless of the other constituent concentrations. PRWISLs are advisory levels based on the findings from this study. The PRWISLs may need to be refined as future studies contribute to the current understanding of recycled water fate and transport.

Proposed recycled water irrigation screening levels are shown in Table V-2-1 and are established for each soil aquifer treatment zone. For compatibility in determining a PRWISL with the method for determining groundwater degradation potential (Volume IV), only constituents evaluated in the groundwater degradation potential methodology were included in this evaluation. Constituents excluded from PRWISL evaluation include alkalinity, dissolved oxygen, oxidation reduction potential, chlorine, pH, total dissolved solids, and heterotrophic plate count. The rationale for exclusion of these constituents is documented in Volume IV of this study. In addition, a PRWISL was not developed for Sodium Adsorption Ratio (SAR) because the effect of SAR is not correlated to the SAT zones as the other constituents are.

2.1. Methodology

To determine proposed recycled water irrigation screening levels, an inverse calculation approach was used from the methodology developed for determining the groundwater degradation potential (Volume IV). An inverse calculation refers to setting the value of the result to determine the value of the input. The groundwater degradation potential describes the potential for groundwater quality to be impacted by recycled water used in irrigation. The groundwater degradation potential (GWDP) is based on (1) the hydrogeological characteristics (SAT capacity) and (2) the quality of the recycled water applied for a given area. A full description of the calculation methodology for SAT capacity and groundwater degradation potential is found in Volume IV of this report.

By constraining the groundwater degradation potential to a maximum target acceptable level that protects groundwater from negative impacts, an inverse analysis can be performed to compute proposed recycled water irrigation screening levels that meet the given criteria. Below is a flow chart of variables used in determining the proposed recycled water irrigation screening levels.


Groundwater Degradation Potential (GWDP)
(Set to 20)
Recycled Water Quality (RWQ) Rating
(Normalized score)
range: 1 to 10
Soil Aquifer Treatment (SAT) Capacity
range: 1 to 10
Aggregate Index (I)
Proposed Recycled Water Irrigation Screening Level (PRWISL)

2.1.1. Groundwater Degradation Potential

Groundwater degradation potential is defined as the potential for groundwater to be impacted by recycled water used in irrigation. The full calculation method for GWDP was described in Volume IV of this study. The GWDP rating system ranges from 0 to 100 with a higher rating referring to a greater threat potential. For this inverse evaluation, the groundwater degradation potential was constrained to a target rating of 20. A rating of 20 is defined for areas with recycled water that has relatively low potential to degrade groundwater. For reference, the GWDP at the pilot study site was found to be 24 using site-specific data.

2.1.2. Soil Aquifer Treatment Capacity

Soil Aquifer Treatment (SAT) capacity is defined as the ability of the soil and aquifer to naturally treat recycled water contaminants. SAT capacity values for the entire study area were developed in Volume IV of this study, based on hydrogeological characteristics including the depth to groundwater, type of shallow soil media, and the type of vadose zone media. SAT capacity values ranged from 1 to 10 within the study area. Low SAT capacity values indicate areas of relatively protective conditions for groundwater. High SAT capacity values indicate areas where groundwater is more vulnerable to contamination from recycled water irrigation.

Because the SAT capacity varies within the study area, the PRWISLs were calculated separately for multiple values of SAT capacity. The SAT capacity range of 1 to 10 was divided into five categories as shown in Table V-2-1.

2.1.3. Recycled Water Quality Rating and Aggregate Index

In Volume IV of this study, recycled water quality (RWQ) ratings were calculated as an overall index of the quality of recycled water sources, considering the concentrations of various constituents that could threaten groundwater. The RWQ rating system ranges from 1 to 10, with higher values indicating higher constituent concentrations. The GWDP was calculated for each area by multiplying the SAT capacity rating with the RWQ rating. For the inverse calculation, the maximum acceptable RWQ rating is determined by the following equation

$$[\text{RWQ rating}] = \frac{[\text{GWDP rating}]}{[\text{SAT rating}]}$$

[RWQ rating] = maximum acceptable recycled water quality rating.

[GWDP rating] = groundwater degradation potential rating, which is set to the target threshold of 20 for this evaluation (Section 2.1.1).

[SAT rating] = soil aquifer treatment capacity rating which ranges from 1 to 10 (Section 2.1.2).

Because the SAT rating varies within the study area, the RWQ rating is calculated separately for each SAT rating category. For each category, the more conservative (i.e. greater) value of SAT capacity was used to calculate the RWQ rating. Using this approach, maximum acceptable recycled water quality ratings are calculated for each zones of soil aquifer treatment capacity as shown in Table V-2-1.

As described in Volume IV, the RWQ ratings were calculated from the aggregate index (I) values using:

$$[\text{unscaled RWQ rating}] = 1 - \mathrm{I}$$

The unscaled RWQ ratings were then rescaled to a range of 1 to 10, based on groundwater concentrations (RWQ rating = 1) and maximum recycled water concentrations (RWQ rating = 10). To back calculate the aggregate index from the maximum acceptable RWQ rating for this evaluation, the RWQ ratings were rescaled from zero to one using the same values. Then the aggregate index was calculated from the RWQ rating using the above equation.

2.1.4. Subindices, Groundwater Quality, and Subindex Exponent

As described in Volume IV, the aggregate index, I, was calculated using the following equations:

$$\mathrm{I} = \left(1 - \mathrm{N} + \sum_{i=1}^{\mathrm{N}} s_i^{-1/k}\right)^{-k} \text{ such that } k = \frac{1}{\log_2(\mathrm{N}-1)} \text{ and } s_i = \left(1 + \frac{q_i}{q_{ci}}\right)^{-m}$$

Where

I = Aggregate index of the recycled water quality.
N = Number of subindices considered. In this study, the number of subindices corresponds to the number of constituents evaluated (N=37).
s_i = Subindex for the individual constituent i.
q_i = Quality of constituent i, which is taken to be the difference between the constituent concentration in recycled water and q_{ci}. q_i is set to zero if the recycled water concentration is lower than q_{ci}.
q_{ci} = Representative groundwater quality for constituent i, which is the current groundwater concentration of the given subbasin with 20 percent of the available assimilative capacity.
m = Subindex exponent. In Volume IV, the following equation was used:
m = [Threat] × ([Threat] – 1) × [mscale]
[mscale] = 0.020783 as determined in Volume IV.

[Threat] = Threat assigned to given constituent as determined in Volume III. Values range from 1 to 5.

The PRWISL for each constituent is the maximum concentration that results in the target groundwater degradation potential. To calculate that value, the specific constituent being evaluated would be the only constituent that contributes to groundwater degradation potential. All other constituent concentrations would be less than or equal to groundwater concentrations plus 20% assimilative capacity. For those constituents, the value of q is zero, and the subindex (s) value for those constituents would be 1. Using the constant value of N=37, and the assumption that 36 of the constituent subindex values are 1, the above equation reduces to I = s.

Using the subindex equation to solve for the constituent quality (q) yields:

$$q_i = \left(I^{-1/m} - 1\right) \times q_{ci}$$

This equation is used to calculate constituent quality values based on the aggregate index I (Section 2.1.3), the subindex exponent m (calculated using the constituent threat as shown above and in Volume IV), and the representative groundwater quality q_{ci}. Values of q_{ci} were determined for each constituent in each groundwater subbasin in Volume IV. Since the values of q_{ci} are different for each subbasin, the PRWISLs are calculated separately for each subbasin.

2.1.5. Proposed Recycled Water Irrigation Screening Level

The constituent quality (q_i) can be expressed as q_i = PRWISL - q_{ci}. Therefore the PRWISL for constituent i can be calculated as follows:

$$\mathrm{PRWISL}_i = \left(I^{-1/m} - 1\right) \times q_{ci} + q_{ci}$$

Using values of m and q_{ci} from Volume IV, and the aggregate index calculated for each SAT capacity, the calculated PRWISLs are shown in Table V-2-1. Direct use of the results of this equation can yield PRWISLs that are higher than maximum concentrations observed in recycled water. Where the calculated PRWISL is greater than the maximum observed concentration in recycled water, the maximum observed concentration is substituted as the PRWISL. This substitution was implemented because concentrations higher than current recycled water maximum values could not be evaluated in this study. Therefore, the PRWISLs must be set so that recycled water quality is either maintained or improved and is not allowed to decline.

2.2. Assumptions

Proposed recycled water irrigation screening levels are set such that the PRWISL of a given constituent will result in the target groundwater degradation potential (GWDP) of 20. This assumes that the quality of recycled water with respect to all other constituents will be at or below representative groundwater quality. As a result, a theoretical recycled water source with concentrations below the PRWISLs for the given SAT zone may still exceed the target GWDP, since the GWDP is calculated based on the aggregated quality of all constituents. PRWISLs were developed in this manner because there is no unique set of concentrations that would result in the target GWDP. To properly evaluate the GWDP for a given water chemistry, the forward calculation as described in Volume IV must be implemented. The PRWISLs are more appropriate for definitively determining when a recycled water source would have greater than minimal GWDP.

The PRWISLs assume that recycled water is the only source of pollution. Areas with other contamination sources in the surface or subsurface pose additional risk groundwater contamination due to mobilization of irrigation water. The irrigation water acts as a major vehicle for mobilizing constituents towards groundwater. It is recommended that application of recycled water is avoided in these areas, as discussed in Section 3.3.

2.3. Limitations

The development of the PRWISLs is subject to the same limitations as the determination of groundwater degradation potential, discussed in Volume IV. The threat values for this study were determined for each recycled water constituent based on available data from the bench test and pilot study. Additional long-term monitoring within the study area may reveal that some constituents are more or less of a threat compared to what was concluded from those investigations. Revisions to the threat levels would directly affect the PRWISLs.

The focus of the PRWISLs is to minimize groundwater degradation caused by recycled water irrigation. Separate consideration is needed for other factors that may limit the allowable concentration of recycled water. An example is salt tolerances of crops that may require more stringent recycled water levels.

Salt tolerances can limit the allowable quality of recycled water. Salts accumulate at the root zone as water is lost through transpiration of plants and evaporation. Plants that are exposed to more salt, expend greater energy to draw water from the soil. Tolerances vary by crop. *Salt Management Guide for Landscape Irrigation with Recycled Water in Coastal Southern California* (Tanji, et. al, date unspecified) provides data on salt thresholds for specific plant species. Winter precipitation and over-irrigating can contribute to the flushing of salts, which can be a concern for groundwater quality.

3. BEST MANAGEMENT PRACTICES

The best management practices (BMPs) presented in this section are recommendations to maintain optimal use of recycled water for irrigation while protecting groundwater. These BMPs are specific to recycled water use as an irrigation source for landscape, and are evaluated with respect to their potential impacts on groundwater resources. Because the main focus of this study is protection of groundwater, BMPs for recycled water use with regard to public health and safety, such as signage, are not discussed in this report unless they also have an impact on potential degradation of groundwater. A comprehensive overview of current BMPs for landscape irrigation can be found in publications such as *Turf & Landscape Best Management Practices* developed by the Irrigation Association (Irrigation Association, 2005). The document includes provisions for an irrigation system's overall quality, design, installation, maintenance, and management.

3.1. Improve Recycled Water Quality

Dilution of recycled water with higher quality water reduces the concentrations of residual contaminants found in recycled water. With dilution, recycled water can be made acceptable for use in areas that otherwise have too high of an acceptable groundwater degradation potential. Expanding the use of recycled water to these areas helps maximize the value of this resource. Areas where dilution should be implemented will vary by the quality of the recycled water source and the area's soil aquifer treatment capacity. Due to costs associated with implementing dilution (i.e. construction of an onsite holding tank), dilution is most practical for sites with large areas of landscaping. Title 22 prohibits any physical connection between recycled water systems and potable water systems without specific backflow protection devices.

Dilution may be an appropriate measure for areas where the constituent concentration of concern in the recycled water is above PRWISLs established for recycled water. PRWISLs, found in Chapter 2 of this document, specify threshold concentrations in recycled water that may achieve the target groundwater degradation potential. PRWISLs are specific to the soil aquifer treatment capacity for the area. Areas with differing soil aquifer treatment capacity have a different set of PRWISLs. Where the recycled water constituent concentration is above PRWISLs, dilution should be considered.

Dilution needs may change as the concentration of a constituent in recycled water may change over time. Periodically reevaluating dilution needs will ensure PRWISLs are met. If the concentration of a constituent in recycled water fluctuates in a given range, the upper value of that range should be used for dilution calculations. A higher concentration in recycled water will yield a greater dilution requirement. The monitoring recommendations in Section 4.2 would be sufficient for determining the appropriate amount of dilution.

In addition to dilution, source control (i.e. controlling the water quality at the treatment plant) may be an option for reducing the concentration of residual constituents of concern found in recycled water. Source control options could involve modifications to treatment processes that will improve the removal of the residual constituents. Source control could also include identification and elimination of sources of recycled water constituents from the waste stream used as the source for recycled water.

3.2. Fertilizer Use

Because nutrients such as nitrogen, phosphorus, and potassium found in fertilizer are also found in recycled water, the need for fertilizer in landscape management can be reduced. Nutrients found in recycled water are significant enough in quantity to supplement fertilizer application. Reducing fertilizer use is of particular importance with regard to nitrate, which is a major groundwater pollutant in a portion of the study area (SCVWD, 2010).

Balancing the overall load of nutrients onto irrigated landscape reduces excess nutrients that are not removed by the root uptake pathway. Over-fertilization in addition to recycled water use can exceed the root uptake as a sink for nutrients. Nutrients that are not taken up by plant needs can travel past the root zone and potentially reach groundwater.

Reducing fertilizer use is applicable for any site using recycled water for irrigation. Recycled water within the study area is currently obtained from one of four sources: Palo Alto Regional Water Quality Control Plant (PARWQCP), South County Regional Wastewater Authority (SCRWA), San Jose / Santa Clara Water Pollution Control Plant (SJ/SC WPCP), and Sunnyvale Water Pollution Control Plant (SWPCP). All of these recycled water sources contains concentrations of nutrients. Mean concentrations of nitrate from the four recycled water sources range from 10 to 104 mg/L as NO_3. Table IV-3-2 from Volume IV contains average concentrations of constituents, including nutrients, of each recycled water source.

To determine how much fertilizer is needed, the landscape manager needs to determine the annual quantity of nutrients needed for the landscape, the annual volume of the recycled water applied to the site, and the concentrations of nutrients found in the recycled water. The nutrient content of fertilizer is typically identified using three numbers representing the percentages by weight of nitrogen, phosphorus, and potassium. For example, a fertilizer labeled 21-7-14 contains 21% nitrogen, 7% phosphorus, and 14% potassium.

The following mass balance equation can be applied to determine the fertilizer needs for a given nutrient with application of recycled water.

$$[\text{Fertilizer need}] = [\text{Landscape requirement}] - 6.24 \times 10^{-2} \left(\frac{[\text{Vol. of RW}] \times [\text{Conc. in RW}]}{[\text{Area}]} \right)$$

Fertilizer need =	Annual amount of nutrient in the form of fertilizer needed for landscape (lb/1000 sq ft-yr)
Landscape requirement =	Annual amount of nutrient needed including uptake efficiency for the landscape based on type of plant (lb/1000 sq ft-yr)
6.24×10^{-2} =	Conversion factor from [mg-ft/yr-L] to [lb/1000 sq ft-yr]
Vol. of RW =	Annual volume of recycled water applied to landscape (acre-ft/yr)
Conc. in RW =	Average concentration of the given nutrient in recycled water source (mg/L)
Area =	Area of the irrigated landscape (acre)

Example:

Assume that the landscape manager at the pilot study site, by trial and error, determined that the nitrogen requirement for the given landscape is 1.8 lb of N / 1000 sq ft per year. Volume application of recycled water at the pilot study was 8,717 ccf/yr (20.0 acre-ft/yr) and the recycled water concentration of nitrate was 10.6 mg/L as N. The area of irrigation for the pilot study was 6.2 acres. The contribution of nitrogen from recycled water is 2.13 lb of N / 1000 sq ft per year. The difference is an excess of 0.33 lb of N / 1000 sq ft needed for fertilizer. This means that recycled water in this example can supply 118% of the nitrogen needs for the landscape. For this scenario, application of nitrate-containing fertilizer should be minimized or avoided.

Any changes with respect to landscaping requirements or recycled water applied will change the fertilizer needs. Landscaping requirements may change when the type of vegetation is replaced. Different landscape types may also have different fertilizer needs depending on the season. Change in the volume of recycled water applied per unit area or quality of recycled water can also change the fertilizer need. When such changes occur, reevaluate for the appropriate fertilizer need.

3.3. Site Selection

In considering areas for recycled water use, this study recommends screening sites for potential sources of pollution. Areas with other contamination sources in the surface or subsurface pose additional risk of groundwater contamination due to mobilization from the irrigation water. The irrigation water acts as a major vehicle for mobilizing constituents towards groundwater, which is true for any irrigation source. For example, known contamination sites that are undergoing soil and/or groundwater remediation would not be a candidate for irrigation with recycled water. Sites that are free of contamination issues avoid the potential for mobilizing contaminants that are already present at the site.

When considering potential expansion areas for recycled water irrigation, the soil aquifer treatment capacity can be used to indicate which locations are more protective of groundwater. Values of soil aquifer treatment capacity were determined in Volume IV for the entire study area, and are shown in Figures IV-2-11 and IV-2-12. Recycled water irrigation is less likely to impact groundwater in areas of high or good soil aquifer treatment capacity. Areas with marginal or least capacity should be evaluated carefully before recycled water irrigation is implemented.

In addition, sites need to be screened for proximity to nearby water supply wells. As established in Title 22, irrigation using recycled water should not take place within 50 feet of any domestic water supply well, unless the well owner specifically allows recycled water application within 50 feet, and a number of physical requirements for the well are met.

Sites should also be screened for vertical conduits (such as abandoned or improperly sealed wells) which may accelerate the mobilization of contaminants downward. Vertical conduits may be addressed by avoiding such sites or sealing the conduits prior to recycled water implementation. Evaluating the site stratigraphy may be useful for determining the potential for lateral movement of water. Where there is significant lateral movement of water consider also checking for vertical conduits around the site nearby.

3.3.1. Potential Contamination Sources

Potential contamination sources from the land surface include land disposal sites, stockpiles, disposal of sewage and water treatment plant sludge, heavy use of fertilizers and pesticides, accidental spills of hazardous materials, and particulate matter from airborne sources. Potential subsurface contamination sources above the water table include leaching septic systems, holding ponds, sanitary landfills, waste disposal in excavations, leakage from underground storage tanks or pipelines, sumps, drywells, and cemeteries.

3.3.2. Screening Method

If a potential area of expansion is not well characterized enough to make a decision on site selection, consider using tools from an environmental assessment of the area of interest. EPA's "All Appropriate Inquiries" (AAI) rule provides useful guidance on evaluating a property's environmental conditions and assessing potential liability for any contamination. Two American Society for Testing and Material (ASTM) standards are compliant to the AAI rule. These include ASTM International's E1527-05 "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process" and ASTM E2247-08 “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process for Forestland and Rural Property.” Important elements in screening for appropriate sites include:

- Interviews with past and present owners, operators and occupants;
- Review of historical sources of information;
- Review of federal, state, tribal, and local government records;
- Visual inspection of the facility and adjoining properties;
- Commonly known or reasonably ascertainable information;
- Degree of obviousness of the presence or likely presence of contamination at the property and the ability to detect the contamination.

3.4. Irrigation Effectiveness

The focus of this study is potential groundwater impacts resulting from use of recycled water for irrigation. BMPs that address the irrigation systems have a direct impact on the distribution of recycled water constituents at the surface, and thus the potential impact to groundwater. Optimizing the efficiency of an irrigation system minimizes the total volume of irrigation needed for application and consequently minimizes the mass loading of recycled water constituents to the site. An optimized irrigation system distributes water uniformly on the landscape, saving money from overwatering, and reducing ponding and surface runoff.

Irrigation using recycled water should be applied such that the infiltration of water past the active root zone is minimized. The volume of water past the root zone contributes to the advective transport of constituents to groundwater. Reducing the volume past the root active zone limits the advective migration of recycled water constituents towards groundwater while irrigation is being applied, although constituents are still flushed downward during precipitation events. Some water infiltration past the root zone is needed to remove salts from the root zone. Ideal irrigation systems should apply no more water than is needed to combat salt buildup. The amount of water needed to remove the excess salts from soils is known as the leaching requirement, which is generally 10 to 30 percent more than the landscaping water requirement.

3.4.1. Appropriate Irrigation Needs

Irrigation needs can be determined using the Landscape Coefficient Method which estimates irrigation needs of landscape plantings in California by using crop coefficients and reference evapotranspiration values. The landscape coefficient method is described in "A Guide to Estimating Irrigation Water Needs of Landscape Plantings in California" (University of California Cooperative Extension, California Department of Water Resources, 2000). It is critical that the determination of the water budget is done accurately so water needs of the crop are met without over-application.

Irrigation should be adjusted accordingly with weather patterns. Irrigation should not fully saturate the soil. Deficit irrigation techniques that leave room in the root zone for additional moisture from rainfall have been demonstrated to protect groundwater without yield reductions (Food and Agriculture Organization of the United Nations, 2002). To prevent deep percolation below roots and runoff, application should not exceed the infiltration rate of the soil or plant needs, except as needed for flushing salts. For salt management, Oster (SCVWD et al, date unspecified) recommends ceasing irrigation with recycled water once two inches of rainfall have occurred during the winter season, restarting irrigation in late spring. However, this recommendation is specific to redwood trees, and may not be appropriate for all landscape types. Seasonal reductions in recycled water application would reduce the annual mass loading of recycled water constituents and therefore reduce the potential impact to groundwater.

Landscape managers can also assess the characteristics of a site through a water audit every three years by a certified irrigation auditor, such as the SCVWD's current Landscape Survey Program (LSP). The SCVWD's LSP includes an in-depth evaluation of the entire water delivery system and points out inefficiencies that can add up to significant water losses. It also includes calculation of an optimum water budget and recommendations for improving system efficiency including upgrading irrigation hardware as well as providing a suggested yearly watering schedule.

3.4.2. Efficient Irrigation System

An efficient irrigation system can help protect groundwater by reducing the over-irrigation of recycled water and consequently the overall mass load of recycled water constituents at the site. The efficiency of an irrigation system can be improved through design, installation, and regular maintenance of the system. Several resources are available to improve an irrigation system. The California Department of Water Resources Model Water Efficient Landscape Ordinance (California Department of Water Resources, 2009) provides guidance on efficient irrigations systems. In addition, the Eastern Municipal Water District from Riverside County authored *"Recycled Water Use Guidelines and Best Management Practices"* (EMWD, date unspecified) which contains tips to improve the irrigation system. The Olivenhain Municipal Water District also maintains a "*Recycled Water Use Guidelines and Best Management Practices*" document (Olivenhain Municipal Water District, date unspecified) with similar content.

3.4.3. Time of Operation

The evening and early morning are typically recommended as optimal times to apply irrigation for two reasons: 1) there is less evaporation loss during this time and 2) there is less human exposure to recycled water due to lower foot traffic during this time. The disadvantage to early morning and late evening irrigation is a lack of potential photodegradation of light-sensitive constituents, such as n-nitrosodimethylamine (NDMA), which has been found to degrade in UV light. However, previous studies have shown that there is little difference in NDMA fate and transport between daytime and nighttime irrigation schedules (Gan et al, 2006). Therefore, due to the limited apparent benefit of photodegradation and potential health concerns associated with direct exposure to recycled water, irrigation during daylight hours is not recommended unless human contact with the irrigation water can be prevented.

3.5. Salt and Nutrient Management Plan

A salt and nutrient management plan should be prepared in accordance with the State Water Resources Control Board (SWRCB) Recycled Water Policy (SWRCB, 2009). The purpose of a salt and nutrient management plan is to protect groundwater from accumulating concentrations of salts and nutrients from recycled water and other sources that would degrade the quality of groundwater and limit its beneficial uses. The plans are tailored to address the water quality concerns in each groundwater basin or subbasin. The plans may also include constituents that impact water quality other than salts and nutrients. The SWRCB has also specified required elements for a salt and nutrient nanagement plan, including a basinwide monitoring plan, water recycling goals and objectives, salt and nutrient source identification, and implementation measures to manage the salt and nutrient loading. The plan should also include estimates for assimilative capacity, which was discussed in Volume IV of this report. The SWRCB recycled water policy states that salt and nutrient management plans should be completed and submitted to the appropriate Regional Water Resources Control Board (RWQCB) by 2014. The SCVWD is working to develop salt and nutrient management plans for the Santa Clara and Llagas Subbasins in coordination with basin stakeholders.

3.6. Gypsum Use

The use of gypsum greatly increases the percolation of water through clayey soils, improving infiltration and accessibility of water to plant roots. In Volume II of this study, gypsum was found to be very effective in increasing the hydraulic conductivity of soils within the study area. Good soil drainage is important to prevent water-logged soil and in turn promote healthy vegetation. However, with recycled water, increasing permeability also decreases the attenuation capacity of the soil due to less residence time for attenuation of recycled water constituents. Hence, mobility of constituents found in recycled water is increased when gypsum is applied.

In practice, gypsum is used in areas with clayey soils which have low permeability. An appropriate level of gypsum is best determined by trial and error such that sufficient infiltration is reached for the amount of water needed by the crop.

From a groundwater protection standpoint, gypsum should be used in moderation with recycled water. However, it should be noted under-application of gypsum can result in poor infiltration and possible ponding and/or runoff. Runoff of recycled water to surface water bodies is prohibited.

Oster (SCVWD et al, date unspecified) recommends gypsum application before the rain season begins because 1) it will prevent low soil salinities developing at the soil surface as a result of leaching by rain, 2) it will reduce sodium levels in the soil near the soil surface, and 3) salinity effects on plants are minimized during the winter due to low temperatures and high humidity. The effect of gypsum is most pronounced immediately after application. Hence, this recommended application schedule also has the benefit of increasing the infiltration rate most when recycled water application is expected to be lowest. With a properly operated irrigation system, the amount of applied recycled water should be reduced during the rain season.

4. ONGOING MONITORING RECOMMENDATIONS

Recommendations for ongoing monitoring were developed to evaluate the potential long term impacts to groundwater from use of recycled water for irrigation in the Santa Clara and Llagas Subbasins. The goal of the ongoing monitoring is to verify over the long term that the groundwater degradation is minimized as a result of recycled water use.

This chapter discusses constituents to analyze, sources to monitor, and frequency of sampling for an ongoing monitoring program. Monitoring recommendations also apply to further monitoring at the pilot study site. These monitoring recommendations serve as a general guideline for monitoring activities, based on the information compiled for this study. Future modifications of this monitoring schedule may be appropriate to optimize this program.

The approach used to develop these monitoring recommendations has similarities to the approach developed and used in *Monitoring Strategies for Chemicals of Emerging Concern (CECs) in Recycled Water* (SWRCB, 2010) including prioritization of constituents using concentrations in recycled water compared to a baseline value. However, the monitoring recommendations in this report are not limited to emerging contaminants, and the basis for selection of constituents is the groundwater degradation potential which is determined in the Volume IV of this report. The basis of selection from the SWRCB document was toxicological relevance. In the SWRCB document, the focus was on three reuse practices 1) indirect potable reuse via surface spreading of recycled water; 2) indirect potable reuse via subsurface injection of recycled water into a potable aquifer; and 3) urban landscape irrigation with recycled water. This report focuses only on the third reuse practice and uses constituent transport evaluations to guide these monitoring recommendations. The SWRCB used only toxicological information in guiding monitoring strategies.

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4.1. Groundwater Monitoring

Monitoring the quality of groundwater over time ensures that groundwater quality is maintained for the present and future. Ongoing monitoring allows for appropriate use of recycled water with respect to groundwater, and alerts if adjustments are needed in volume or in quality to the recycled water and the irrigation system. Collected groundwater monitoring data should be compared to baseline groundwater samples collected before recycled water irrigation begins, such as the current groundwater quality data presented in Volume IV.

4.1.1. Locations

Groundwater monitoring should target areas where recycled water for irrigation is currently being implemented, or is expected to be implemented. Wherever possible, existing wells should be used as opposed to installing new wells, as a cost-saving measure. Selected wells should target areas that have higher groundwater degradation potential, so that the most sensitive areas of the groundwater basins are monitored. The groundwater degradation potential for the study area is shown on Figure IV-3-3 and IV-3-4 in Volume IV of this report.

Site-specific data can be used to directly calculate the groundwater degradation potential to help determine if additional monitoring is needed. The use of this data, along with available groundwater monitoring results from areas with similar physical and recycled water quality characteristics may reduce the need for additional monitoring.

If additional monitoring is needed, monitoring wells should target both the principal aquifer and the shallow aquifer. The principal aquifer should be monitored since that is the primary groundwater source for most wells in the county. Monitoring of aquifers above the principal aquifer would be useful in providing advance indication of the transport of recycled water. Selected monitoring wells should have screen intervals that do not cross into multiple aquifers, to avoid the effects of diluting the representative groundwater. Wells that are screened in multiple aquifers, whether between a shallow and principal aquifer or among multiple aquifers within the principal zone would not be appropriate for this monitoring.

Ideal monitoring wells are located at sites where the irrigation with recycled water is currently implemented or planned for the future. Monitoring wells at or adjacent to such sites is recommended so that degradation of groundwater due to recycled water use can be observed as early as possible. Relative to the irrigation site, monitoring wells should be directly downgradient of the site to monitor for potential recycled water constituents that may reach groundwater. Monitoring well located between application sites and production wells are also useful to serve as early indication of changes in water quality that may affect production. Local water elevation data is useful in determining groundwater flow direction. Existing knowledge of the site soil profile, from historical boring logs, can also be useful in determining if there are any preferential flow patterns at the site. Depth to water and generalized groundwater gradient direction can be provided by the SCVWD if available, upon request. While not every irrigation site needs to be monitored, at least one should be monitored to represent each region of expansion with similar GWDP values. If a region of expansion contains different rating categories of GWDP, consider monitoring an irrigation site in each unique subregion.

The number of monitoring wells will depend on the extent of expanded use of recycled water. The more wells implemented in the monitoring program, the better characterized the transport of recycled water will be and ideally each area of planned expansion would be represented. However, cost considerations will limit the number of wells. Preferably, existing wells should be used where available.

Within the area of current or planned recycled water irrigation, the location of monitoring wells should prioritized to areas of highest groundwater degradation potential as shown on Figures IV-3-3 and IV-3-4 of Volume IV of this report. As mentioned above, direct calculation of the groundwater degradation potential using site-specific data and consideration of available groundwater monitoring results from areas with similar physical and recycled water quality characteristics would help identify areas where additional monitoring is needed.

The following is a summary of proposed criteria for achieving adequate monitoring:

1) Select or install wells at or adjacent to sites where recycled water irrigation is implemented. Monitoring wells should be downgradient of the application area.

2) While not every irrigation site needs to be monitored, at least one should be monitored to represent each region of expansion with similar GWDP values. If a region of expansion contains different rating categories of GWDP, consider monitoring an irrigation site in each unique subregion.

3) Monitoring wells located between application areas and production wells will be useful in monitoring water quality that may affect production.

4) Monitor for the groundwater of interest (i.e. in the principal aquifer) and in shallower aquifers. Shallower aquifers can provide an early indication of changes in water quality.

5) Avoid monitoring wells that are screened in multiple aquifers, since samples would effectively be an average groundwater concentration across multiple aquifers.

6) Use denser monitoring well spacing in areas of higher GWDP where groundwater degradation is most likely to occur.

4.1.2. Frequency

The frequency of groundwater monitoring should be associated with the groundwater degradation potential for each area. Areas with higher groundwater degradation potential merit more frequent monitoring to ensure that groundwater impacts are detected early, and steps can be taken to address those impacts, if warranted. Areas of lower groundwater degradation potential are only likely to show groundwater impacts, if any, over longer time frames.

As a starting point for determination of groundwater monitoring frequency, the results of the pilot study (Volume III) were reviewed. The pilot study site, using site-specific data, has a groundwater degradation potential of 24 on a scale of 1 to 100, which is classified as low potential. The first occurrence of recycled water constituents in groundwater during the pilot study was approximately three months after recycled water implementation, when PFCs were observed in the groundwater. In the pilot study, PFCs were not detected during baseline sampling, and they could be uniquely attributed to the recycled water source. Therefore, three months was established as the reasonable minimum time frame for evaluation of recycled water impacts in areas of low groundwater degradation potential. For a monitoring program, this corresponds to quarterly sampling. Monitoring frequencies for areas with different groundwater degradation potentials should be increased or decreased accordingly.

Since some groundwater degradation was observed in the pilot study under relatively protective conditions, quarterly monitoring is recommended initially as a minimum for all areas to ensure groundwater is protected. Initial monthly monitoring is appropriate for areas of relatively high groundwater degradation potential. Previous phases of the study have shown that over time, groundwater concentrations are expected to become asymptotic as conditions approach long-term steady state. Therefore, it is appropriate to gradually reduce the monitoring frequency over time. Reduced monitoring frequency over time allows for initial confirmation of lack of groundwater degradation, followed by ongoing monitoring at a more appropriate frequency for evaluating long-term conditions.

Below is a recommended schedule of groundwater sampling, with the year indicating the amount of time after recycled water application begins:

Highest Groundwater Degradation Potential in Represented Area	Monitoring Frequency		
	Year 1	Year 2-4	Year 5 and beyond
1-20	Quarterly	Semi-annually in spring and fall	Annually in fall
21-40	Quarterly	Quarterly	Semi-annually in spring and fall
41-60	Monthly	Quarterly	Semi-annually in spring and fall
61-100	Monthly	Quarterly	Quarterly

After a period of monitoring events, if evaluation of the data obtained demonstrates that the quality of groundwater has not degraded past 20 percent of the assimilative capacity and does not show an increasing trend, consideration may be given to reducing the groundwater monitoring scope by decreasing the monitoring frequency or the number of wells monitored. Reduced groundwater monitoring scope should still be within reason to adequately ensure groundwater quality is maintained. Before a reduction in monitoring scope, trend analysis with forward projection of the groundwater concentrations should be used to demonstrate that the concentrations will not exceed 20 percent of the assimilative capacity over a longer time frame. Conversely, if adverse impacts are encountered in a specific area the monitoring scope can be adjusted to increase in frequency or in the number of wells monitored in the specific area.

The long-term monitoring frequencies in the above schedule may be revised with the consideration of additional long-term monitoring data from sites with recycled water irrigation. To date, there is limited field-scale data on long-term impacts to groundwater from recycled water application. With additional data from further studies, revisions to this monitoring frequency should be evaluated with consideration of the applicability of the new data to recycled water application within the study area.

4.2. Recycled Water Sampling

Recycled water monitoring is recommended for treatment plants so that quality of the recycled water is known. If recycled water quality worsens over time, this can have an effect on the groundwater degradation potential, which should be reassessed. Maintaining quality of recycled water ensures safety of groundwater resources.

In addition to recycled water sampling, irrigation water sampling (i.e. sampling of the final product of the water, including any dilution if applicable) is useful in assessing if irrigation water has concentrations exceeding the proposed recycled water irrigation screening levels specified in this report.

4.2.1. Frequency

At minimum, annual monitoring of recycled water is recommended from each wastewater treatment plant that provides recycled water for irrigation use. More frequent monitoring of recycled water may be useful for determining seasonal changes in the water quality, or evaluating water quality changes when improvements in the treatment process are implemented.

4.2.2. Number of Monitoring Points

Constituent concentrations in recycled water may vary within the distribution system. For instance, during the pilot study, PFCs were not detected at the recycled water source, but were detected in water from the irrigation system. Although only one point in the distribution system was monitored for the pilot study, this information is consistent with known fate and transport processes and observations from the bench test, including formation of PFCs from precursors. Concentrations of disinfection byproducts (NDMA, haloacetic acids) were also observed to vary between samples collected directly from the plant and samples collected from the pilot study site. Samples collected at various points in the distribution system may provide further insight on the quality of recycled water over the distribution system. It is not always appropriate to collect recycled water samples only from the treatment plant. Instead, samples should be collected at irrigation sites closest to the recycled water source as well as irrigation sites furthest from the recycled water source. Sampling at those points would have the greatest potential to capture the variability of recycled water chemistry within the study area. Note that as the recycled water distribution systems are expanded, sampling locations may need to be revised or added over time

Any treatment changes or improvement at the water treatment facility can impact the quality of recycled water. Additional monitoring may be needed, in such events, to determine how quality of water may change. If the treatment change results in a reduction in recycled water quality, this may warrant counter measures to meet PRWISLs for recycled water.

4.3. Constituent List

A list of the constituents to be analyzed for future monitoring is found in Table V-4-1. The list contains constituents of recycled water that were determined by this study to be of concern with regard to adverse impacts to groundwater. The constituent list is in accordance with recommendations for further monitoring as discussed in Volume III. This constituent list is recommended for all groundwater and recycled water samples. The reporting limits for all analyses should be at or below the typical reporting limits listed on Table V-4-1.

The list of constituents may be revised if it is demonstrated that one or more of the constituents is consistently below detection, or alternatively below the associated groundwater concentration, in the recycled water source. Three consecutive results below the detection limit or groundwater concentration would be appropriate support for eliminating a constituent from further analysis in groundwater monitoring. However, the constituent must be below detection or groundwater concentration in all samples collected from the distribution system. Some constituents, such as PFCs, may not be detected at the recycled water source, but could be detected further in the distribution system. If monitoring at all points in the distribution system (as recommended in Section 4.2.2) yields concentrations below detection or below the groundwater concentration of a constituent for three consecutive monitoring events, there is sufficient evidence to demonstrate minimal potential for impact of that constituent in the irrigated recycled water. Therefore, the constituent analysis may be eliminated from the sampling program for that recycled water source. If a constituent is eliminated from the sampling program for a specific recycled water source, it may also be eliminated from the groundwater sampling program from the associated area of application. Similarly, the *Monitoring Strategies for Chemicals of Emerging Concern (CECs) in Recycled Water* (SWRCB, 2010), allows for removal of constituents where updated data indicate that the current measured environmental concentrations are less than a “monitoring trigger level”. For this monitoring program, the current groundwater quality is analogous to the “monitoring trigger level”.

The original full constituent list should be applied for recycled water and groundwater samples after any changes in the treatment process that would affect recycled water quality. In addition, this list of constituents may be adapted in the future to include new contaminants in recycled water that are identified and determined to have merit for monitoring.

4.4. Quality Control Samples

Quality control samples such as travel blanks and field duplicates are a valuable part of an overall sampling program to ensure that the sampling program yields analytical results that are representative of the water analyzed and are not biased on the sampling/analysis process or errors from the process. This study recommends collecting and analyzing one set of quality control samples: one travel blank and one field duplicate for every twenty samples, starting in the first year of implementation. Additional types of quality control samples may be warranted if analytical or sampling bias is suspected.

A field duplicate is a duplicate, independent sample collected at the same place, at the same time. The field duplicate and project sample are taken from the same source, stored in separate containers and analyzed independently. It is used to estimate sampling and laboratory analysis precision. Duplicate samples should generally be collected for samples where more constituents are expected to be above the detection limit. For this sampling program, this is expected to be the recycled water source samples.

A travel blank is a sample of analyte-free media, usually deionized water. It is useful to identify errors or cross contamination attributed to shipping and handling procedures.

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TABLES

Table V-2-1:
PROPOSED RECYCLED WATER IRRIGATION SCREENING LEVELS (PRWISLs)
RECYCLED WATER STUDY

		Santa Clara Subbasin					Llagas Subbasin				
		SAT zone: 1-2	SAT zone: 3-4	SAT zone: 5-6	SAT zone: 7-8	SAT zone: 9-10	SAT zone: 1-2	SAT zone: 3-4	SAT zone: 5-6	SAT zone: 7-8	SAT zone: 9-10
Parameter	Units										
Biological											
Coliforms, Total	%	66.67%	66.67%	66.67%	44.91%	29.06%	66.67%	66.67%	66.67%	44.91%	29.06%
E. Coli	%	20.00%	20.00%	7.57%	3.45%	2.24%	20.00%	20.00%	7.57%	3.45%	2.24%
Fecal Coliforms	%	20.00%	20.00%	7.57%	3.45%	2.24%	20.00%	20.00%	7.57%	3.45%	2.24%
Inorganics											
Boron	µg/L	505.00	505.00	505.00	505.00	505.00	505.00	505.00	505.00	505.00	505.00
Bromide	mg/L	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Calcium	mg/L	69.20	69.20	69.20	69.20	69.20	69.20	69.20	69.20	69.20	69.20
Chloride	mg/L	320.00	320.00	277.81	187.73	151.00	320.00	320.00	235.73	159.29	128.13
Magnesium	mg/L	42.20	42.20	42.20	42.20	42.20	42.20	42.20	42.20	42.20	42.20
Nitrate as NO3	mg/L	122.00	122.00	122.00	122.00	122.00	122.00	122.00	122.00	122.00	122.00
Nitrite as NO2	mg/L	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59	5.59
Phosphate	mg/L	14.13	14.13	14.13	14.13	14.13	14.13	14.13	14.13	14.13	14.13
Potassium	mg/L	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00
Sodium	mg/L	230.00	230.00	121.58	82.15	66.08	230.00	230.00	110.57	74.72	60.10
Sulfate	mg/L	247.00	247.00	247.00	247.00	210.79	247.00	247.00	247.00	247.00	190.00
Emerging Contaminants and DBPs											
N-Nitroso Dimethylamine (NDMA)	ng/L	490.00	11.51	6.61	5.22	4.58	490.00	11.51	6.61	5.22	4.58
Perfluorochemicals (PFBA)	ng/L	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
Perfluorochemicals (PFOS)	ng/L	87.00	87.00	80.74	63.82	56.01	87.00	87.00	80.74	63.82	56.01
Perfluorochemicals (PFOA)	ng/L	109.00	109.00	109.00	109.00	106.93	109.00	109.00	109.00	109.00	106.93
HAA5	µg/L	263.00	75.48	42.85	35.90	33.06	263.00	75.48	42.85	35.90	33.06
Bromochloroacetic Acid	µg/L	36.90	6.94	2.75	1.86	1.50	36.90	6.94	2.75	1.86	1.50
Total THMs	µg/L	366.00	366.00	366.00	251.23	221.17	366.00	366.00	366.00	251.23	221.17
General Water Quality Parameters											
Dissolved Organic Carbon	mg/L	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
Total Organic Carbon (TOC)	mg/L	9.62	9.62	9.62	9.62	5.58	9.62	9.62	9.62	9.62	5.58
Parameters with Low Occurrence in the Pilot Study											
Cyanide	mg/L	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Ethylenediaminetetraacetic acid (EDTA)	µg/L	305.00	305.00	305.00	305.00	223.53	305.00	305.00	305.00	305.00	223.53
NTA	µg/L	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Perchlorate	µg/L	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surfactants (MBAS)	mg/L	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.36
Terbuthylazine	µg/L	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10

Notes:

1. For each SAT zone, the most conservative value (ie greater SAT rating) is used for calculating the Recycled Water Quality Rating
2. The maximum possible Recycled Water Quality Rating is 10.
3. The target acceptable Groundwater Degradation Potential is taken to be 20.
4. The derived equation for determing PRWISLs is as follows: PRWISL = (I^(-1/m)-1)*qc+qc
5. Where the PRWISL determined by the equation is greater than the maximum observed in recycled water, the maximum observed value becomes the PRWISL.
6. The PRWISL of a given constituent is developed by assuming that the other recycled water constituents are equal to or less than the representative groundwater quality. The PRWISL represents the maximum tolerable concentration at which the target groundwater degradation potential could still be achieved. However, water quality that is below the PRWISL for each constituent will not neccesarily achieve a groundwater degradation potential below the target level.

TABLE V-4-1
LIST OF RECYCLED WATER CONSTITUENTS TO MONITOR
RECYCLED WATER STUDY

Constituent	**Suggested Analytical Method**	**Units**	**Typical Reporting Limit$_1$**
Boron	EPA 6010	µg/L	100
Calcium	EPA 6010	mg/L	0.5
Magnesium	EPA 6010	mg/L	0.5
Sodium	EPA 6010	mg/L	0.5
Sulfate	EPA 300.0	mg/L	0.5
Chloride	EPA 300.0	mg/L	1
Total Filterable Residue at 180C (TDS)	SM2540C	mg/L	10
Bromochloroacetic Acid	EPA 552.2	µg/L	1
Dibromoacetic Acid	EPA 552.2	µg/L	1
Dichloroacetic Acid	EPA 552.2	µg/L	1
Monobromoacetic Acid	EPA 552.2	µg/L	1
Monochloroacetic Acid	EPA 552.2	µg/L	2
Trichloroacetic Acid	EPA 552.2	µg/L	1
Heterotrophic Plate Count	SM 9215 B	CFU/mL	1
Coliforms, Total	SM 9221 B	MPN/100mL	2
Fecal Coliforms	SM 9221 E	MPN/100mL	2
N-Nitroso Dimethylamine (NDMA)	EPA 521	ng/L	2
Perfluorochemicals (PFBA)	MWH LC/MS/MS	ng/L	20
Perfluorochemicals (PFOS)	MWH LC/MS/MS	ng/L	5
Perfluorochemicals (PFOA)	MWH LC/MS/MS	ng/L	5
Ethylenediaminetetraacetic acid (EDTA	EPA 300 (mod)	µg/L	100
Surfactants (MBAS)	SM 5540C	mg/L	0.2
Bromide	EPA 300.0	mg/L	0.02
Nitrilotriacetic acid (NTA)	EPA 300 (mod)	µg/L	100
E. Coli	SM 9221 F	MPN/100mL	2
Perchlorate	EPA 314.0	µg/L	4
Cyanide	SM 4500CN E	mg/L	0.01
Terbuthylazine	EPA 525 plus	µg/L	0.1

Notes:
1) Typical reporting limits as seen in pilot study and bench test.